

PSYCHIATRY - THEORY, APPLICATIONS AND TREATMENTS

**THE PHENOMENOLOGY OF
HYPNOTIC INTERACTIONS**

Nova Science Publishers, Inc.

PSYCHIATRY - THEORY, APPLICATIONS AND TREATMENTS

Additional books in this series can be found on Nova's website under the Series tab.

Additional e-books in this series can be found on Nova's website under the e-books tab.

PSYCHOLOGY OF EMOTIONS, MOTIVATIONS AND ACTIONS

Additional books in this series can be found on Nova's website under the Series tab.

Additional e-books in this series can be found on Nova's website under the e-books tab.

Nova Science Publishers, Inc.

PSYCHIATRY - THEORY, APPLICATIONS AND TREATMENTS

**THE PHENOMENOLOGY OF
HYPNOTIC INTERACTIONS**

KATALIN VARGA

Nova Science Publishers, Inc.

 **nova**
publishers
New York

Copyright © 2012 by Nova Science Publishers, Inc.

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted in any form or by any means: electronic, electrostatic, magnetic, tape, mechanical photocopying, recording or otherwise without the written permission of the Publisher.

For permission to use material from this book please contact us:

Telephone 631-231-7269; Fax 631-231-8175

Web Site: <http://www.novapublishers.com>

NOTICE TO THE READER

The Publisher has taken reasonable care in the preparation of this book, but makes no expressed or implied warranty of any kind and assumes no responsibility for any errors or omissions. No liability is assumed for incidental or consequential damages in connection with or arising out of information contained in this book. The Publisher shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the readers' use of, or reliance upon, this material. Any parts of this book based on government reports are so indicated and copyright is claimed for those parts to the extent applicable to compilations of such works.

Independent verification should be sought for any data, advice or recommendations contained in this book. In addition, no responsibility is assumed by the publisher for any injury and/or damage to persons or property arising from any methods, products, instructions, ideas or otherwise contained in this publication.

This publication is designed to provide accurate and authoritative information with regard to the subject matter covered herein. It is sold with the clear understanding that the Publisher is not engaged in rendering legal or any other professional services. If legal or any other expert assistance is required, the services of a competent person should be sought. FROM A DECLARATION OF PARTICIPANTS JOINTLY ADOPTED BY A COMMITTEE OF THE AMERICAN BAR ASSOCIATION AND A COMMITTEE OF PUBLISHERS.

Additional color graphics may be available in the e-book version of this book.

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Polystyrene : properties, performance, and applications / editors, James E.

Gray.

p. cm.

Includes index.

ISBN: 978-1-61209-117-4 (hardcover)

1. Polystyrene. I. Gray, James E. (James Ehren), 1960-

TP1180.S7P75 2010

668.4'233--dc22

2010047082

Published by Nova Science Publishers, Inc. † New York

CONTENTS

| | | |
|------------------------------|--|-------------|
| Contents | | v |
| Preface | | vii |
| Acknowledgements | | ix |
| List of Abbreviations | | xiii |
| Chapter 1 | Introduction: Conceptual Framework | 1 |
| Part I | Synchrony in Dyadic Interactions | 13 |
| Chapter 2 | The Concept of “Interaction Synchrony” | 15 |
| Chapter 3 | Models of Approach of the Dynamic Characteristics of Relationships | 23 |
| Chapter 4 | The Methodology of Studying Interactional Synchrony | 29 |
| Chapter 5 | The Function and Consequences of Interactional Synchrony | 35 |
| Part II | The Hypnotic Interaction | 47 |
| Chapter 6 | Hypnosis as a Model of Dyadic Interactions, and Hypnotic Interaction as an Independent Topic | 49 |
| Chapter 7 | The Hypnotic Relationship as Social Support | 57 |
| Chapter 8 | The Approach of the Relational Dimension in the Clinical Situation | 73 |
| Part III | The Phenomenology of the Hypnotic Relationship | 83 |
| Chapter 9 | The Relationship between the Behavioral and Subjective Indices of Hypnosis | 85 |
| Chapter 10 | Development of Instrumentation | 103 |
| Chapter 11 | Subjective Experience of the Hypnotists in the Hypnotic Interaction | 117 |
| Chapter 12 | Can Experiences be Simulated? | 133 |
| Chapter 13 | Characteristics of the Hypnotic Interaction as Compared to Other Dyadic Situations | 143 |

| | | |
|-------------------|---|------------|
| Part IV | Interactional Synchrony at the Experiential Level | 151 |
| Chapter 14 | Imagination and Hypnotic Interaction | 153 |
| Chapter 15 | Definition of Synchrony at the Level of Experiences | 161 |
| Part V | Special Possibilities of the Interactional Approach of the Phenomenological Data | 175 |
| Chapter 16 | Phenomenology of Hypnosis Styles | 177 |
| Chapter 17 | Phenomenological Patterns as a Function of Kinship | 185 |
| Chapter 18 | Oxytocin System and Hypnotic Interaction | 193 |
| Part VI | Discussion, Outlook | 203 |
| Chapter 19 | The Hypnotic Relationship as a Corrective Experience | 205 |
| Chapter 20 | The Hypnotic Relationship as a Holding Force | 223 |
| Chapter 21 | Summary | 239 |
| Appendices | | 269 |
| References | | 295 |
| Index | | 331 |

Nova Science Publishers, Inc.

PREFACE

Researchers from the Budapest Hypnosis Laboratory approach hypnosis as an interactional process, a special encounter between hypnotist and subject. That means that not only the subject but the hypnotist is also studied at a multilevel approach. Katalin Varga and her colleagues extended the concept of interactional synchrony to the phenomenological data. In this book, methodological developments and results are presented, as are special techniques of eliciting subjective reports, paper and pencil tests suitable for interactional use, and ways to analyze interrelating phenomenological data. The special possibilities of the interactional approach of phenomenological data are exemplified by recent empirical results, including non-hypnotic interactions. All of these empirical results seem to add special new possibilities to the understanding of hypnosis in particular, and human dyadic interactions in general. The book encourages researchers to follow this interactional approach and methodology. Though the book is based on experimental hypnosis sessions with healthy volunteers, many clinical implications and clinically relevant findings are also presented.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

ACKNOWLEDGMENTS

My sincere appreciation to those colleagues whose help made it possible to write this book:

Béleczi Nikolett
Biró Eszter
Józsa Emese

I am also grateful to Gősiné Greguss Anna for her valuable help in preparation of the final text of the manuscript.

I would like to express my gratitude to the following colleagues who have been my colleagues and partners in designing and conducting the studies mentioned in the book:

Bányai Éva
Biró Eszter
Bognár Zsuzsanna
Császár Noémi
Csókay László
Gősiné Greguss Anna
Horváth Róbert
Józsa Emese
Kekecs Zoltán
Kovács Krisztina
Mérő László
Mészáros István†
Tauszik Katalin
Varga S. Katalin
Vágó Péter

Special thanks are due to John Gruzelier, Michael Nash, Ronald Pekala, and Bernhard Trenkle for their support of our research and publications.

I deeply appreciate the work of the hypnotists who conducted hypnosis sessions as volunteers in our studies, and shared their professional and personal experiences with me and our professional community:

Agárdi Tamás
Ambró Ágnes
Balogh Ágnes
Bányai Éva
Békési Beáta
Bíró Gyula
Bujdosó Gyöngyvér
Császár Zsuzsa
Dávid Tamás
Dolmányos Zsuzsa †
Fülöp Emőke
Gősiné Greguss Anna
Jakubovits Edit
Kállai János
Kemény Katalin
Költő András
Kovács Antal
Lázár Éva
Lehőcz Márta Luca
Magyar Erzsébet
Suhai Gábor
Szigeti Marian
Szilágyi Adrienn
Szili Katalin
Varga Katalin
Varga S. Katalin
Zeley Réka

I would like to express my thanks to the following people for their support, help or various other assistance in preparing this book:

Andrek Andrea
Bárd Imre
Békeffy Mónika
Benczúr Lilla
Bognár Zsuzsa
Császár Noémi
Csöndör Bernadett
Ehman Bea
Gaál Nóra
Gaál Zsófia
Gombárszki Dénes
Horváth Zsuzsa
Kuna Gábor
Magyar Erzsébet

Rózsa Sándor
Szabolics András
Szabolics Balázs
Szabolics Gergely
Szabolics Imre
Szili Katalin
Újszászi Júlianna
Urbán Erika
Urbán Róbert
V.K. Kumar
Vágó Péter
Varga Lászlóné
Varga S. Katalin
Vargha András
Veres-Székely Anna
Zeley Réka

The studies covered in this cook were conducted at the following institutions of Eötvös Loránd University, Budapest

- Department of Comparative Physiology (Összehasonlító Élettani Tanszék) (1982-1985)
- Department of Experimental Psychology (Kísérleti Pszichológiai Tanszék) (1985-2000)
- Department of Experimental General Psychology (Kísérleti Általános Pszichológiai Tanszék) (2001-2004)
- Center for Affective Psychology (Affektív Pszichológiai Intézeti Központ) (2005-2011)
- Department of Affective Psychology (Affektív Pszichológia Tanszék) (2011-)

The studies of our laboratory were financially supported by the following grants:

- OTKA (F 006645) “A hipnotizőrök élményvilágának feltárása és elemzése”, 1993-1996, to Varga Katalin
- OTKA (T 025040) “Interakciós szinkronitás az élmények terén: a kiváltó helyzetek és az elemzési módszerek kidolgozása” 1998-2000, to Varga Katalin
- 1998-2001 A Magyar Tudományos Akadémia Bolyai Ösztöndíj, “A diadikus interakciók élményvilágában megmutatkozó összhang fokának vizsgálata” to Varga Katalin
- OTKA (T 34454) “A hipnózis evolúciós pszichológiai szemlélet vizsgálata” 2001-2004, to Bányai Éva
- OTKA 62210, “Affektív prozódia éberen és hipnózisban: összehasonlító vizsgálatok” 2006-2009, to Gósiné Greguss Anna

... and thank you, Éva, for opening the door...

Nova Science Publishers, Inc.

LIST OF ABBREVIATIONS

| | |
|---------------|--|
| AAH | Active-alert hypnosis |
| AAI | Adult Attachment Interview |
| ACC | anterior cingulate cortex |
| AIM | Archaic Involvement Measure |
| ASC | Altered state of consciousness |
| COMT | Catechol-O-methyltransferase |
| df | degree of freedom |
| DIH | Dyadic Interactional Harmony Questionnaire |
| DZ | dizygotic twins |
| EAT | Experiential Analysis Technique |
| ECR-R | Experiences in Close Relationship-Revised |
| ERP | <i>event related potentials</i> |
| H | Hypnotist |
| HGSHS | Harvard Group Scale of Hypnotic Susceptibility |
| HS | hypnotic susceptibility |
| MZ | monozygotic twins, |
| n | number of cases |
| n.r. | not registered |
| ns | nonsignificant |
| PCI | Phenomenology Consciousness Inventory |
| PCI DC | PCI DC: Dissociative control |
| PCI IA | PCI IA: Attention to internal processes |
| PCI NA | PCI NA: Negative affect |
| PCI PA | PCI PA: Positive affect |
| PCI VI | PCI VI: Visual imagery |
| PEAT | Parallel Experiential Analysis Technique |
| PTSD | Post Traumatic Stress Disorder |
| S(s) | Subject(s) |
| sd | standard deviation |
| S-H | subject-hypnotist |
| SHSS:C | Stanford Hypnotic Susceptibility Scale, Form C |
| SHSS:A | Stanford Hypnotic Susceptibility Scale, Form A |
| SHSS:B | Stanford Hypnotic Susceptibility Scale, Form B |
| S-S | subject-subject |
| TACT | Textual Analysis Computing Tools |
| TAS | Absorbtion Questionnaire of Tellegen-Atkinson |
| TRH | Traditional relaxational hypnosis |
| VVIQ | Vividness of Visual Imagery Questionnaire |
| WSGC | Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C |

Nova Science Publishers, Inc.

Chapter 1

INTRODUCTION: CONCEPTUAL FRAMEWORK

It was already thirty years ago that I – as a second year student of psychology – knocked at the door of Éva Bányai and asked if there was a possibility of joining the work of the Hypnosis Laboratory she was leading.

There was. From that day on, I have been dealing with hypnosis in some way or another almost every day: In addition to doing hypnosis research, I have also been a hypnotherapist since 1991, and my interest has also been extended to the area of the application of suggestive techniques in general for the past couple of decades (Varga and Diószeghy, 2011; Varga, 2008a, 2011a, 2011b).

The results of the hypnosis laboratory in Budapest have supported the mutual attunement of subject and hypnotist in the hypnosis situation, grasping several interactional synchrony phenomena: distribution of performance between the cerebral hemispheres as a function of the hypnotic susceptibility of the subjects, synchronized electromyographic changes (Bányai, 1985a, 1985b), characteristic changes in the text of the hypnotist – e.g., modifications in the length of the hypnotist's speech (Bányai, Gösi-Greguss et al., 1990); posture mirroring between subject and hypnotist, matching the hypnotist's movements to the breathing rhythms of the subject, attunement of the breathing rhythms and heart rates (Bányai, 1991, 2008a, 2008b).

In addition to the “hard” data of behavior and physiology, we have always paid attention to studying the *world of experiences* of the participants of the hypnosis interaction by assessing these experiences and processing them with reference to each other. The present work will introduce the reader to this world.

1.1. THE CORNERSTONES OF THE APPROACH: *PHENOMENOLOGICAL* EMPHASIS WITHIN AN *INTERACTIONAL* FRAMEWORK

Regardless of theoretical commitment – whether one thinks hypnosis is a special state or is a phenomenon that can be explained by cognitive and social psychological concepts (see BOX 01) – *subjective experiences* are interesting for everybody. It is especially exciting to get a glimpse into the phenomenology of *both* participants of the hypnotic interaction: It is exciting for those who believe in the state-theory, primarily because hypnosis is one of the few altered states of consciousness that is brought about in an *interpersonal* situation; the

followers of the social psychological view are in their “own” field, because this way they can get a glimpse into the “internal world” of those interpersonal phenomena by which this theory wishes to explain the phenomena of hypnosis.

The present work does not want to take sides with the opinions of either of the theories, and we it is not our aim to prove or disprove the views of one theoretical branch or those of the other. As to the theoretical attitude of present work, it sympathizes with what Kihlstrom (2008) put this way:

“This ‘third way’ in hypnosis research construes hypnosis simultaneously as both a state of (sometimes) profound cognitive change, involving basic mechanisms of cognition and consciousness, *and* as a social interaction, in which hypnotist and subject come together for a specific purpose within a wider socio-cultural context” (p. 41, original emphasis).

Therefore, hypnosis as an interpersonal process does not exclude the existence of an altered state of consciousness at the same time; and vice versa, the subjective concomitant of the alteration of consciousness can be and is worth to be studied within an interpersonal context. As we will see later, Éva Bányai’s **social psychobiological** model of hypnosis (Bányai, 1991) provides an excellent theoretical basis for this approach.

BOX 01. THE CONCEPTS AND MAIN THEORIES OF HYPNOSIS

In the history of hypnosis, several conceptualizations have appeared that wished to grasp the essence of the situation: The main concept of explanation was animal magnetism for Franz Anton Mesmer, artificial somnambulism for Marquis de Puységur, lucid sleep for Abbé Faria, suggestibility for Hippolyte Bernheim, dissociation for Pierre Janet (Gauld, 1992).

The modern approach of hypnosis is not in need of key concepts, either: imaginative involvement, divided consciousness, absorption, subjective conviction, involuntariness, compliance, goal directed fantasy, role-playing – just to name a few (Killeen and Nadh, 2003; Woody and McConkey, 2003).

It helps with the overview of several hypnosis theories if we concentrate on the schools organized along the main issues. The first few decades of modern hypnosis research was loud with the **state versus nonstate** debate.

The followers of the **state theory** – Hilgard, Bowers, Kihlstrom, Woody, Gruzelier, Tart – thought that hypnosis is based on an altered state of consciousness, which was later refined as hypnosis being accompanied by an altered state of consciousness (although it may not be a causal background of the phenomena occurring in hypnosis). The followers of this theoretical approach often use the expression “trance” for altered states of consciousness, and if the existence of a “*special process*” is looked for or assumed, it can be expected that this camp can be found in the background. This approach assumes that there is a special state that can be differentiated from other states of consciousness, and that is characteristic only of hypnosis. The “trait” idea is also linked to this group of theorists; it means that there are stable differences among people in how susceptible they are to hypnosis, and this trait is characteristic of the individual. The existence of a special hypnotic ability or trait (allegedly) indicates that hypnosis is a special process of state.

On the other hand, followers of the other school – Sarbin, Barber, Spanos, Lynn, Kirsch – believe that the phenomena observed in hypnosis can be explained without assuming any special state or process: “Everyday” social psychological concepts like the subjects’ beliefs, attitudes, expectations, imaginings about hypnosis, and their interpretations of the suggestions are sufficient to explain the various phenomena of hypnosis.

Naturally the two schools can be divided into further sub-groups; the theories of their most prominent representatives differ from one another in essential elements (Kihlstrom, 2008; Killeen and Nash, 2003; Perry and McConkey, 2002; Ruehle and Zamansky, 1997).

The main representative of the **compliance theory**, Coe thinks that in the hypnosis situation the performance of the suggestions is an intentional act on the part of the subject, which is not necessarily accompanied by the subjective experience validating the given suggestion. For example, when the suggestion is about the heaviness of the arm, the subject intentionally lowers his or her arm, without having the real subjective experience of heaviness.

Several theories can be listed under the **sociocognitive theory**, but they all agree in that they trace hypnosis back to a *single* process, and this process is basically *social* in nature. There are differences among them regarding the social factor that is emphatic, and what role it plays according to the given theory.

The approach of Spanos – which was first called *cognitive behavioral perspective*, then *social-psychological interpretation*, and finally *social-cognitive theory* – deems the response to hypnotic suggestions as a strategic enactment shaped by the subject’s understanding of the task-demands in the special context of hypnosis. For example, involuntariness is caused by the misattribution of the suggestions or the strategy of the subject to look like one who is under deep hypnosis.

Lynn and Rhue, who are considered to be the modern representatives of this theory, assume that there are cognitive strategies behind performance that are not necessarily conscious; they think that images or other cognitive mechanisms helping the performance of the suggestions may arise automatically, too.

Recently, this line of theorizing is represented by the *expectancy* theory of Kirsch and Lynn; in this theory, the expectations and presumptions of the subjects are decisive with respect to the performance of the suggestions. The subject may have a general expectation that hypnosis is effective, that it “works”: In this case, the subjects are more likely to mobilize their various cognitive strategies in hypnosis situations. More generally: all kinds of social influences described by social psychology may play a role in the development and modification of *response expectancies*. However, as soon as the expectation is developed, it will automatically “realize” the response.

According to the dissociated experience theory, or neodissociation theory, the executive and control functions are modified as compared to the waking state so that there is a dissociative barrier between awareness and the intention and effort of performance. This is how Hilgard’s theory explains the involuntariness of carrying out the suggestions.

Kihlstrom, the modern representative of the neodissociation theory considers hypnosis as a state in which profound changes occur sometimes in cognitive organization, and various dissociative mechanisms detach the normal organization of emotional, behavioral, and physiological responses.

The theory of **dissociated control** was proposed by Bowers. It builds on the two levels of behavior organization that exist in normal functioning, too. Novel or complex behavior is organized by higher level, **supervisory control** through the **contention scheduling** system. In this case, performance is accompanied by the experience of voluntariness and intention. In case of well-practiced behaviors, there is no need for a higher level control process, thus it will be automatic.

In hypnosis – says the theory – the higher level supervisory system becomes weaker, it will dissociate from the contention scheduling system, and therefore, the performance of the suggestions will be involuntary. The theory assumes involuntariness and low level of effort not only in the experiences of the subjects, but considers it to be really accompanied by minimal cognitive effort.

The **social psycho-biological** theory of hypnosis is a mixture of the social and the state theories, as it regards the essence of the hypnosis situation as an interpersonal interaction that is suited to bring about a special state, while also activating relational patterns in the secure context of hypnosis that resemble the fundamental relationship patterns in life.

Kihlstrom, debating Kirsch and Lynn's (1995) paper, put forward the following observation which is a sufficient basis for us to accept the alteration of consciousness in hypnosis as a fact, and to strive for mapping the related subjective world:

“But there is a state of altered consciousness in hypnosis: Amnesic subjects cannot remember things they should be able to remember; analgesic subjects do not feel pain that they should feel; subjects asked to be ‘blind’ and ‘deaf’ do not see and hear things that they should be able to see and hear. Even the most mundane motor suggestions involve alterations in consciousness: We feel heavy objects in our hands, objects that are not there, forcing our outstretched arms down to our sides; we feel magnetic forces, forces that do not exist, pulling our extended hands and arms together. These are alterations in conscious experience observed in hypnosis, and it does not matter if they can also occur in the absence of a hypnotic induction, and it does not matter if there are no physiological markers of hypnosis. These alterations in consciousness are what make hypnosis interesting, and they remain to be described and explained” (Kihlstrom, 1997, p. 326).

The question may arise why we rely on subjective data, when modern hypnosis research today builds on well-observable, objectively recorded behavioral scales, and many high-quality studies about the neuropsychological background of hypnosis are being published one after the other. Let me quote Jaynes for an answer, whose ideas are cited by Killeen and Nash (2003, p. 212):

“All we have to do is to find those parts of the brain that are responsible for consciousness, then trace out their anatomical evolution. ... Now this sounds like an excellent scientific program. [But] there is a delusion in such reasoning. ... Even if we had a complete wiring diagram of the nervous system, ... though we knew the connections of every tickling thread of every single axon and dendrite in every species that ever existed, together with all its neurotransmitters ... we would still never – not ever – form a knowledge of the brain alone know if that brain contained a consciousness like

our own. We first have to start from the top, from some conception of what consciousness is, from what our own introspection is. We have to be sure of that before we can enter the nervous system and talk about its neurology (Jaynes, 1976, pp. 16, 18).

The novelty we can offer is the extension of the study of experiences (including collection of data on the alteration of consciousness) to *both* participants of the interaction.

The study of subjective experiences “in their own right” is quite rare even in the case of the subjects, while those of the hypnotists are virtually unexplored, especially in the experimental literature. Thus, the phenomenological analysis of the hypnotic interaction should be considered as exploratory in nature. Naturally, its broader framework is given by the social psychobiological theory of hypnosis.

1.2. INTERACTIONAL APPROACH IN THE CLINICAL APPLICATION OF HYPNOSIS

Several branches of hypnotherapy emphasize interpersonality, regarding both the problems and their solutions, and the hypnotherapeutic situation:

- We could easily assume that the relational dimension between therapist and client is negligible in the clinical application of self-hypnosis, because it belongs to the essence of the process that the patient hypnotizes him/herself. As opposed to this, Sanders (1993) emphasizes that a very close therapeutic relationship that can form the basis of the clinical application of self-hypnosis is needed in this case. In fact, the therapist must be available to the patient even between hetero-hypnosis sessions, and must serve as a firm background to dealing with the unexpected turns of self-hypnosis performed by the patient.
- Brown arrives at the same conclusion regarding the therapeutic application of metaphors: “Metaphor is an active and collaborative process that cannot succeed without the *cooperation* of the therapist and patient” (Brown, 1993, p. 305, emphasis added).
- Talking about hypnotherapeutic (or hypnosis-like) work with children, Kohen and Olness (1993) say that it increases the therapists’ “interpersonal sensitivity and their commitment to carefully selecting language and monitoring the timing and pacing of their communications and interventions” (p. 375).
- Although these authors also think that all hypnosis is self-hypnosis, they definitely stress the importance of the relationship between therapist and patient: “What is most important is the therapists’ careful, concerned, and continuing observation of children and the mutuality of their interactions with the children” (p. 360).
- The aim of therapy with severely disturbed persons (psychotics, borderline patients), whose early attachment experiences are missing or extremely negative, is to go through the developmental process again, creating the possibility to re-live those experiences that had never occurred in reality. “This slow and painstaking process of building and maintaining a positive therapeutic relationship with severely disturbed patients is probably *the most important factor* in their eventual success in creating a

positive self-concept and sense of relationship and in ultimately developing the potential for a healthy life” (Murray-Jobsis, 1993, p. 433, emphasis added).

- One might think that the approach where the relational dimension is not very emphatic is the *cognitive skills* approach, since according to this approach, it is the patient’s cognitive “endowment” and its development that determine the success or failure of hypnosis. In contrast, Gfeller says “a hypnotic intervention should not be implemented until there is a clear sense that some degree of positive rapport has been established” (p. 242). He says the key element in this is that the patient perceive the therapist as worthy of trust and genuine.

As we can see, in clinical work, someone may hold that hypnosis is not an independent modality of therapy (e.g., Bates, 1993; Bloom, 1993a), or may argue that it is very much so (e.g., Bányai, 2008b), the interactional approach to hypnosis may enrich clinical work with significant data.

1.3. APPROACH BY RESEARCH AND THE APPLIED AREA

The worlds of hypnosis research and the clinical application of hypnosis have drifted quite apart nowadays. The concepts they use, their approaches, and their methodologies are quite different, although they are still together – in a most welcome way – at international congresses of hypnosis and in hypnosis journals. This “break” is well reflected in Covino’s (1997) words:

“Clinicians often view the research of academicians as idiosyncratic and irrelevant. They see most investigative work as the effort of a very few people who ask increasingly esoteric questions that do not relate to their understanding of patients” (p. 110).

It is a decided aim of the present work to bridge the gap between the experimental and clinical branches of hypnosis. I am convinced that clinical issues can (and must) have controlled studies, while research is not worth a fig if it does not find its way to the applied world. In order to reach this common aim, the methods or approaches themselves can be strictly statistical in nature, while even anecdotes or examples from subjective reports may point at phenomena that bring us closer to the understanding of hypnosis (Perry, 2004).

Fortunately, the present works, while based on the empirical work of experimental hypnoses in the laboratory, have evident clinical relevance:

- The very fact that the hypnotist is also a subject of study is clinically relevant, because there are very scarce controlled data-collection on the experience and process of hypnotism (the act of inducing hypnosis).
- Interactional analysis itself has a clinical “flavor”: It is the *relationship* between hypnotist and subject/patient that is in the center of the study, which is so emphatic in the clinical literature.
- The studied key concepts – synchrony, intimacy, imagination, involvement, altered state of consciousness – are all central elements of the clinical situation, too.

- At the discussion of different lines of thought, I will rely both on research-theoretical works and clinical studies from the literature.

BOX 02. COMPARISON OF THE EXPERIMENTAL AND CLINICAL SITUATIONS

As Nash (2008b) described in his analysis, hypnosis – similarly to psychoanalysis – originated in the clinical work in the 19th century, as a medical procedure that strived to help patients with various complaints in real life situations. After this start with a clinical emphasis – as opposed to psychoanalysis – hypnosis has already moved into the world of laboratory research as well, where researchers try to understand hypnosis on the basis of bundles of data secured in mostly healthy students, forgetting the individual analyses of real life situations.

It is important to note that both wings – clinical application and laboratory research – are flourishing by now, professional journals and handbooks give space to clinical case studies and fields of application, and to large sample theoretical works next to each other.

Our approach strives at “sending a message” to both areas, and at showing methods and results that are relevant both from a clinical and a theoretical perspective. We will try to follow Covino’s (1997) advice, who said that the best experiments show some coherence with their clinical experience and can provide some guidance in terms of treatment guidelines.

**Table box 2.1. Differences between approaches of researchers and clinicians
(after Covino, 1997)**

| | Researcher | Clinician |
|---|---|--|
| Who does he deal with? | Homogeneous group | Heterogeneous group |
| How long does it take? | For a prescribed, brief period | The end of the work is usually determined by the improvement or termination of the problem |
| What kind of work is it? | It deals with people on the basis of a standardized protocol, assigned randomly | Symptom-focused, flexible approach, applying several theoretical frameworks |
| What are the data? | Objective data, precise, contradiction-free procedures with predictive power | Descriptive, open-ended narratives, contradictions and ambiguity are accepted |
| What is their self-definition? | A researcher is a man of intellect, a representative of science and detached observation | A clinician is a man of healing, who gives advice, recommends practical solutions, and is committed to the patient |
| What are the persuasion criteria for them? | Well-controlled, reliable and valid research that can exclude alternative explanations | High esteem of the colleagues, improvement of the patients, clinical experience are the main sources of credibility |
| What are good data like? | Theoretically consistent, appropriately processed and analyzed, statistically exact, generalizable, informative for future research | Useful, effective, relevant, bringing objective improvement and clinical changes |
| What is the reward? | Discoveries, academic freedom, secure job, late rewards of scientific recognition | Caring for the patient, satisfaction of the patient, usually direct rewards of honorarium and recognition by the community |

Referring to Baker's (2000) paper, Diamond (2000) clearly states that the interactional approach of hypnosis is an important step both in the clinical and in the research areas of hypnosis: "Baker claims that a 'two-person paradigm of hypnotic experience,' informing both our research and clinical work, is necessary to understand 'the core mutuality' of the living, hypnotic process" (p. 72), then "I would suggest that we must begin by acquiring more of a feel for the atmosphere of the hypnotherapeutic engagement. Specifically, we need to have a sense of the hypnotherapist's *subjectivity*, as well as the patient's *subjective experience* of the hypnotherapist's interventions (including the specific hypnotic techniques and suggestions)" (p. 73, original emphasis).

This is the very approach we will pursue in this work – for the time being, by the dyadic analysis of the experiential world of hypnosis experiments only. We will show methods that inform us both about the atmosphere of the session (e.g., Dyadic Interactional Harmony questionnaire, DIH, Varga, Józsa, et al., 2006), and about the subjective experiences of the participants (Phenomenology of Consciousness Inventory, PCI, Pekala, 1982, 1991a, 1991b; and Parallel Experiential Analysis Technique, PEAT, Varga, Bányai et al., 1994). We will also go further than that by analyzing the experiences of the two participants with reference to each other as well.

Fortunately, we can find examples of the joint approach of experimental and clinical aspects, too.

Such an example is active alert hypnosis (for a more detailed review, see Chapter 11), that was initially developed for research purposes by Éva Bányai (Bányai and Hilgard, 1976), then several research and theoretical questions were clarified by the application of this method under laboratory conditions, and in the meantime, the method "found its way" to clinical application (Bányai, Zseni, and Túry, 1993).

The phenomenon of self-hypnosis is also a nice example: In addition to its theoretical considerations, it also has important practical, clinical relevance Sanders, 1993; Fromm, Brown, et al., 1981; Fromm, Lombard, et al., 1987-88).

Similarly, the topic of pain and the effectiveness of hypnosis in relieving pain are excellent areas for the cooperation of experimental, clinical, and even theoretical professionals (see e.g., Montgomery, DuHamel, and Redd, 2000).

1.4. DEFINING HYPNOSIS

All that is left for now is the definition of hypnosis. Despite its long history, it is very difficult to give a generally accepted definition of hypnosis even today. A brief collection of definitions will reflect nicely how rich the store of possible trends can be: Some give greater emphasis to the situations, others to the procedures, still others to certain experiential characteristics.

In the present work, I will define hypnosis as follows, based mainly on the works of Bányai (1991, 2008a, 2008b) and Kihlstrom (1985, 2008):

In its basic form – in hetero-hypnosis – hypnosis is a special attunement between two persons, and as a result of their inter-action, behavioral and subjective changes may occur in both of them. The context of "hypnosis" and the suggestions of the hypnotist serve as a

framework for this purpose; this provides a broader and freer possibility for the participants to form their behaviors, to express their emotions, and to have subjective experiences than in their everyday lives.

As to hypnotherapy, I quote the elegantly simple definition of Rhue, Lynn, and Kirsh (1993) with pleasure: “hypnotherapy can be defined as the addition of hypnosis to accepted psychological or medical treatment” (p. 4).

BOX 03. HYPNOSIS DEFINITIONS

Below you can read a list of hypnosis definitions from various sources, far from being exhaustive. It is worth noting if the definitions of the different authors have an interactional emphasis (they are grouped separately), and if not, what their emphasis is: the situation, the state, the diagnosis, or something else.

No Emphasis on Interaction

Orne (1959) thinks of the existence of the trance state as a clinical diagnosis. “It must be confirmed by the subject’s report of alterations in his experience” (Orne, 1959, p. 298).

“I have tried to define hypnosis as that state or condition in which subjects are able to respond to appropriate suggestions with distortions of perception or memory.” (Orne, 1977, p. 19).

“We define hypnosis functionally as an alternative state of awareness and alertness characterized by heightened and focused concentration that is achieved in order to actualize a particular goal or a latent potential” (Kohen and Olness, 1993, p. 359).

“I conceptualize hypnosis as an altered state of consciousness (ASC) in which one is absorbed in a variety of mental activities resulting in changes in perception, mood, and memory.” (Bloom, 1993a, p. 677).

“...adopted a definition of hypnosis as a procedure wherein changes in sensations, perceptions, thoughts, feelings or behavior are suggested” (American Psychological Association, Division of Psychological Hypnosis, 1993).

“Hypnosis typically involves an introduction to the procedure during which the subject is told that suggestions for imaginative experiences will be presented. The hypnotic induction is an extended initial suggestion for using one’s imagination, and may contain further elaborations of the induction. A hypnotic procedure is used to encourage and evaluate responses to suggestions. When using hypnosis, one person (the subject) is guided by another (the hypnotist) to respond to suggestions for changes in subjective experience, alterations in perception, sensation, emotion, thought or behavior.” (definition of the American Psychological Association, Division of Psychological Hypnosis, cited by Barnier and Nash, 2008, p 7).

Emphasis on Interaction

“In its most restricted sense (...) ‘hypnosis’ refers to a deliberately structured setting in which a ‘hypnotist’ agrees to hypnotize a willing subject, implements a formal procedure to achieve specific goals, and knowingly labels the process as ‘hypnosis’” (Beahrs, 1989, p. 172).

The term hypnosis is used to denote an interaction between two people (or one person and a group) in which one of them, the hypnotist, by means of verbal communication, encourages the other, the subject or subjects, to disattend to their immediate realities and concerns and to focus their awareness on inner experiences such as thoughts, feelings, and imagery. The hypnotist further attempts to create changes in the way subjects are feeling, thinking, and behaving by directing them to imagine various events or situations that, were they to occur in reality, would evoke the intended changes in the subjects” (Alden and Heap, pp. 65-66) “Two persons enter a relationship for a predetermined, brief period in a protected environment in a secure situation, a relationship that is intensive, mutually tuned to each other, reflecting unconditional acceptance, and filled with trust, that is usually characteristic of the ideal atmosphere between parent and child” (Definition of *hypnotherapy* in the Protocol of Hypnotherapy, 2004).

“Hypnosis may be defined as a social interaction in which one person, designated the subject, responds to suggestions offered by another person, designated the hypnotist, for experiences involving alterations in perception, memory, and voluntary action. In the classic case, these experiences and their accompanying behaviors are associated with subjective conviction bordering on delusion, and involuntariness bordering on compulsion” (Kihlstrom, 1985, pp. 385-386).

Twenty three years after this already “classical” definition of hypnosis, Kihlstrom emphasizes that he prefers to call hypnosis as a process:

“Hypnosis is a process in which one person, designated the hypnotist, offers suggestions to another person, designated the subject, for imaginative experiences entailing alterations in perception, memory, and action” (Kihlstrom, 2008, p. 21).

Later, he says in the very same study:

“Hypnosis entails a dyadic relationship between two individuals, the subject and the hypnotist; in the case of self-hypnosis one person takes on both social roles” (Kihlstrom, 2008, p. 38).

1.5. THE STRUCTURE OF THE PRESENT WORK

In the subsequent chapters, we will first discuss the world of dyadic interactions from the standpoint of synchrony occurring between the interactional partners (Part I). Then we will focus on the hypnotic situation as an interactional phenomenon (Part II).

In the next section, we will review the methods and data regarding the experiences of the hypnotized persons and of the hypnotists (Part III), just to arrive at the question of the possibilities of capturing the synchrony between the experiences of the two partners.

In the next section (Part V), there will be some examples of the interactional analysis of the phenomenological data from the empirical data of our laboratory, and finally (Part VI), the special possibilities inherent in the hypnotic relationship will be analyzed, and, naturally, we will attempt to place our data and results among the findings of hypnosis research, clinical application, and human relationships in general.

The main stream of the text will be interspersed with boxes in which certain phenomena related to the given topic will be discussed in greater detail, or our further research results will be given.

The parts that show our own results, only the most important data and results will be given. The details of the series of experiments, the methods of data processing, and the results of statistical analysis can be found in the appendices and in the original publications. All of the studies cited as our own work are based on the written informed consent of the participants (including the hypnotists).

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

PART I: SYNCHRONY IN DYADIC INTERACTIONS

INTRODUCTION

In this part, first we will review the *concept*, the explanatory *models*, and the research *methods* of interactional synchrony, and then we will discuss those views that deal with the role and *function* of interactional synchrony in our lives.

In the end, we will reach an essential point in the present work, namely, to the *extension* of the concept of interactional synchrony to the *world of experiences*.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

Chapter 2

THE CONCEPT OF “INTERACTION SYNCHRONY”

Human development is dyadic by nature. The human baby pays emphatic attention to human faces from the very first moments after its birth, and is also able to imitate facial expressions (Meltzoff and Moore, 1977). It is able to cooperate with its interaction partner in a finely tuned synchrony from the age of a few weeks, already reflecting the characteristics of the given culture. The patterns of vocal synchrony are different in French and American mother-child dyads, while immigrant Indian mothers transmit the interaction patterns of the host country toward their infants (Gratier, 2003). Adult interpersonal relationships are also dynamic processes; their participants are in constant mutual interaction with each other. In order to increase the viability of the relationship, they contribute to its development, growth, and maintenance in various ways (Werner and Baxter, 1994).

Consequently, researchers of human relations attach increasing importance to phenomena of synchrony arising in the process of interactions and to their systematic exploration. According to the results of research and theorizing about synchronous phenomena, these phenomena can be listed in the category of “interdependence”. In this sense, interdependence means that two persons have an effect on each other, or adapt to each other so that harmony and coordination develops between them in several areas.

Regarding psychological theorizing and the methodology of the related research, new and fresh approach is called for by the fact that “interdependence” – being an interpersonal phenomenon – cannot be understood by the study of the participating individuals. The independent identity of the participants partly and temporarily ceases to exist in the processes of synchronization. One of the most interesting developmental challenges of the past decades of psychology is the question of how this close interdependency comes about, and what methodological development is necessitated by its study.

We can meet the phenomena that can be listed under interdependence as the main category in many areas of psychology. Attitude research talks about the “similarities” and agreement of attitudes; the expression “reciprocity” is used in the field of emotions; “empathy”, “understanding”, “intersubjectivity”, “emotional contagion”, and “mutuality” in the psychoanalytical sense also belong to the category of interdependence (see, e.g., Hatfield, Cacioppo, and Rapson, 1994; Josselson, 1996; Kelley, Bersheid, et al., 1983; Kenny and Kashy, 1991).

BOX 04. DEFINITIONS OF SYNCHRONY

“The smooth meshing of interaction” (Bernieri and Rosenthal, 1991, p. 403).

“An observable pattern of dyadic interaction that is mutually regulated, reciprocal, and harmonious” (de Mendonca, Cossette, et al., 2011, p. 133).

“The individuals are engaged in a cooperative enterprise in which both parties get what they want over the course of their social exchanges” (Wahler, Herring, and Edwards, 2001, p. 473).

“The extent to which an interaction appears to be reciprocal and mutually rewarding” (Isabella, Belsky, and von Eye, 1989, p. 13).

“A synchronous interaction is the one that involves shared affect, joint attention, and responsivity on the part of both parent and child” (Skuban, Shaw, et al., 2006, p. 424).

“Synchrony is comprised of behavioral, affective, and cognitive signals which structure communication within a mutually regulated feedback-system” (analyzing the definition of Brazelton, cited by Barber, Bolitho, and Bertrand, 2001, p. 52).

“Interaction synchrony in the context of parent-infant relatedness, addresses the matching of behavior, affective states, and biological rhythms between parent and child that together form a single relational unit” (Feldman, 2007a, p. 329).

“The temporal coordination of discrete events into a global system that regulates the expression of its various components” (Feldman, 2007b, p. 340).

The approach built on interdependence appears in more and more areas. Regarding the educational role of the parents, for example, today we no longer think it is something the parent unilaterally represents, or “executes” on the child, rather, it is *jointly shaped* by both parties in close cooperation, characterized by reciprocity and mutual responsiveness (see, e.g., Barber, Bolitho, and Bertrand, 2001; Skuban, Shaw, et al., 2006). As we will see, several other concepts (e.g., the concept of transference) have gone through similar transformation in the past few decades.

The so called **dyadic synchrony** arising between two persons is also interdependent: It is a *bidirectional, dynamic* concept; both interactional partners contribute to its development or even to its absence (Altman, 1990; Cappella, 1990; Lindsey, Colwell, et al., 2008; Lindsey, Cremeens, et al., 2009). Tickle-Degnen and Rosenthal (1990) assign three characteristics to the concept of **rapport**: (1) *mutual attentiveness*, i.e., both members of the dyad pay attention to each other, (2) the interaction is characterized by *positivity* (friendliness, care for each other), (3) *coordination, balance, and harmony* can be seen in the course of the interaction between the members of the dyad.

An interaction is said to be **coordinated** if the rhythm of manifestations, and the nature of posture and body movements match each other (Cappella, 1997). Bernieri and Rosenthal (1991) consider *behavioral* coordination present if the rhythm of behavior of the parties is coordinated and simultaneous movements appear, i.e., if the individual behavior of the interacting parties are interrelated. This does not necessarily mean reciprocity or complementarity; it only means that the individual reactions are *mutually responsive* to the actions of the other (Cappella, 1997).

Phenomena of interaction synchrony are of fundamental importance in the – non-conscious – regulation of human interactions, and are in a continuous interaction with the

subjective experiences, proximity, intimacy, and rapport experienced by the participants of the interaction. The first mention of the concept is attributed to Condon’s works (Condon and Sander, 1974; Condon, 1982), to be discussed in greater detail in the methodological chapter. Initially, Condon described the synchrony between the voice and the body movements of the talker *him/herself* (self-synchrony), arriving at the conclusion that vocalization and body movements are the expression of the same phenomenon, therefore, they operate as one. Later, he noticed that similar phenomena of synchrony appear *between* the talker and the listener, too, and in order to differentiate them from self-synchrony, he called them **interactional synchrony**. Initially, professional circles regarded the phenomenon with criticism, based on both theory and methodology. This is why Condon’s works proving that interactional synchrony can be shown between newborn babies – unable to talk yet – and their caregivers were significant; and that in some pathological cases – e.g., autism and dyslexia – the patient gets into synchrony with the material heard only with some delay. This delay, however, is systematic and typical of the individual, while the extent of delay was found to be related to the severity of the pathology (Wiltshire, 2007).

Thus, the concept of **interactional synchrony** originally meant the rhythmic attunement of the manifestations – bodily movements, vocal patterns – of the talker and those of the listener. This original – narrow – meaning of interactional synchrony has expanded in several directions.

Several functional definitions can be found in interactional synchrony research (Feldman, 2007b, p. 330):

- a) synchrony as a “*match*” or “*co-occurrence*” between the behaviors or affective states,
- b) synchrony as the *sequential relation* between the behavior of one partner and the following behavior of the other,
- c) synchrony as the *ongoing lagged associations* between partner’s stream of behaviors as measured by time series analysis.

Burgoon, Stern, and Dillman (1995) introduced the concept of **interpersonal adaptation** for the comprehensive description of the adaptation of the interactional partners to each other. The field is very rich in concepts. Indeed, the number of terms used in the topic is discomfortingly great. Feldman (2007a), for example, lists mutual influence, mutual regulation, affect attunement, contingency, and coordination as synonyms for interactional synchrony appearing in the literature.

Waugh (2002) mentions several harmony-oriented constructs, used by representatives of the area: “sensitive responsiveness, contingent responsivity, reciprocity, mutuality, dyadic affect regulation/affective exchanges, affect attunement, behavior state matching, interactional synchrony, mutual coordination, dyadic adaptation, and dyadic interactional harmony” (Waugh, 2002, p. 4).

This abundance of concepts may stem from the fact that there are many kinds of synchronous phenomena, each of which deserves a different name. It may also mean, however, that the area is not fully clarified yet and that there is no general agreement between researchers and theorists regarding which term to use for the different phenomena and how to define them. For our present line of thinking, it is sufficient to review the related concepts on the basis of Harris and Waugh’s (2002) analysis:

Focusing on mutual responsiveness:

- Reciprocal responsiveness
- Contingent responsivity
- Reciprocity
- Mutuality / mutual contingency
- Social contingency

Focusing on matching emotional states or behavior:

- Affect attunement
- Dyadic affect regulation
- Behavior state matching
- Reciprocal matching behaviors

Focusing on the smooth-flowing nature of the interaction:

- Behavioral harmony
- Interactional synchrony
- Dyadic synchrony
- Synchrony

Thus, when the relationship between the (usually behavioral) data recorded in two persons in interaction deviates from chance level, and the data are coordinated either in time or in pattern, we see the phenomena of interpersonal coordination (Bernieri and Rosenthal, 1991; Cappella, 1997; Davis, 1982). The basis of attunement can be temporal or patterned. Many momentums and behavioral elements may appear in harmony with each other: e.g., posture, body movements, facial expressions, vocal rhythm, pitch, and tone, gaze, etc. (see Harrist and Waugh, 2002).

Interpersonal coordination includes two basic types: *behavior matching*, including mimicry and mirroring, and *interactional synchrony*, indicating mainly characteristics that reflect harmony in rhythm (Lakin, Jefferis et al., 2003). In case of harmony within a smaller group, rather than a dyad, we talk about *behavioral congruence* (Pelech, 2002).

The concept **mimicry** means that the partners in interaction automatically – i.e., typically not intentionally and without conscious control – adjust many of their manifestations, speech characteristics, facial expressions, emotions, moods, postures, gestures, mannerisms, and idiosyncratic movements to those of their partners (Lakin, Jefferis, et al., 2003). Chartrand and Bargh (1999) use the metaphor of **chameleon effect** in these cases. Mimicry can be differentiated from **mirroring**. In the latter case, adapting the movements or posture of the partner takes place upon the actual observation of the partner. Mimicry may take place without being actually together, e.g., when hearing the sounds of an accident, one may wrinkle one's face without seeing the actual participants (Brunel and Martiny, 2000).

Werner and Baxter (1994) use the expressions *entrainment* or *synchrony* when both interaction partners have the willingness and ability to coordinate their own individual cycles, thus creating a common rhythm. This definition deserves special attention since in this

conceptualization the emergence of synchrony is conditional upon the conscious intentionality (“willingness”) of the partners, as if it was only a matter of decision to get into synchrony with somebody. A similar phenomenon can be found behind the expressions “matched and unmatched cycle” and “timing and mistiming”. Indeed, when applying the so called “covert pacing” techniques, the therapist may even consciously follow his/her partner by mirroring his/her posture, by breathing in the same rhythm, by talking in the same tone of voice, etc. (Coe, 1993).

2.1. EXTENDING THE CONCEPT OF SYNCHRONY TO THE LEVEL OF SUBJECTIVE EXPERIENCES

The phenomenon of interactional synchrony was thus observed at the visible behavioral level up to this point, and the concept itself also included only the matching and harmony of the pattern of behavior of the interactional partners for a long time, following Condon’s conceptualization. The behavior-centered approach of research – occasionally supplemented by studying physiological indices – can probably be traced back to the fact that interdependence was mainly studied in mother-infant relationships, where the study of subjective experiences is naturally excluded on the infant’s side. The original concept of interactional synchrony (based on the similarity of rhythm) constitutes quite a strict criterion. Namely, it implies that two phenomena must have (individual) rhythms, and that both rhythms must show regularities (e.g., a sinusoidal course) that have a “chance” to get into harmony. Naturally, it is determined again by external criteria (usually by the researcher) what is the level of harmony that is accepted as “rhythmic” and what is accepted as “synchrony” (Werner and Baxter, 1994).

A novel concept of interactional synchrony will be introduced here, when indices of synchrony will be identified on the basis of the *phenomenological* reports of the participants. This approach is new in many respects, because

- it is based on conscious experiences, that can be reported,
- the joint interaction is evaluated holistically afterwards by the partners or the researchers,
- the presence (nature) or absence of synchrony appears only at the subsequent analysis.

The spread of the interactional approach has brought about the systemic study of open behavior (movements, speech) and physiological indices; however, very scarce attention has been paid to revealing and studying subjective experiences. It must be acknowledged that the study of subjective experiences is problematic both methodologically, and – as many think – even from a theoretical perspective (see, e.g., Ericsson and Simon, 1980; Natsoulas, 1970; Nisbett and Wilson, 1977). Therefore, it is especially difficult to study subjective experiences at the level of the dyad rather than the individual, observing not only the patterns of individual experiences, but also their interdependence and interpersonal attunement in the interaction. Furthermore, in some fundamentally important relationships (like the mother-

infant relationship), it is impossible to study the experiences of one of the partners. This, however, does not explain why the study of subjective experiences is often neglected even in cases where no such theoretical obstacle exists. In fact, where the subjective experience is part of the essence of the relationship (as in intimate relationships), thus, it is not foreign to the research to collect verbal reports (Urbán, 1994).

The theoretical and methodological problems of the study of subjective experiences do not sufficiently justify the neglect of studying how the interaction is experienced, all the less so, as there are research areas in psychology where – despite widespread disputes – subjective experiences are successfully studied, yielding meaningful results. For instance, the study of subjective experiences is natural in the area of altered states of consciousness (ASC), as in these phenomena it is the changes in subjective experiences themselves that are the only or most important signs or concomitants of the alteration of consciousness (see, e.g., Barber and Wilson, 1977; Diamond, 1987; Ludwig, 1972; Morgan 1987; Pope and Singer, 1978; Shapiro, 1980; Sheehan and McConkey, 1982; Tart, 1970a, b, 1972a, b, 1986; Tart and Kvetensky, 1973). This theoretical and methodological experience can and should be applied to the study of the phenomena of interactional synchrony, too.

As we will see later, in the area of ASC, it lends itself naturally to consider hypnosis as a model of interactions that can be characterized by attunement, and to use it for developing interaction research itself, too, for hypnosis is actually a short-term interpersonal cooperation that is brought about by the alteration of consciousness for a given purpose. In his seminal paper, Orne (1959) pointed out that the essence of hypnosis lies not in behavior or in other visible reactions, but in the very subjective experiences only the given person has internal access to. Setting out from this position, Fromm emphasizes that in order to understand the essence of hypnosis, the phenomenology of hypnosis must be revealed, described in a controlled way, and analyzed. One of the most important achievements of her research group is the very description of the similarities and differences between the subjective experiences of self-hypnosis and those of hetero-hypnosis (Eisen and Fromm, 1983; Field, 1965; Fromm et al., 1981; Fromm, Lombard, Skinner, and Kahn, 1987-88; Kahn, Fromm, Lombard, and Sossi, 1989; Lombard, Kahn, and Fromm, 1990). Cox and Bryant (2008) emphasize in their paper evaluating and analyzing hypnosis research that hypnosis is a fundamentally private experience, and therefore, researchers need methods with which it can be revealed and analyzed.

Accepting the perspective of the main trends of the literature of interactional synchrony research (e.g., Bernieri, Reznick, and Rosenthal, 1988; Bernieri and Rosenthal, 1991; Waugh, 2002), the concept of interactional synchrony will be used in this expanded sense in the present work as well. Thus, we will consider it interactional synchrony if there is a match or attunement between any index of the interaction partners, let it be physiological indices, behavioral phenomena, or subjective experiences. Within this extended interpretation of interactional synchrony, the present work concentrates on the harmony of subjective experiences (phenomenology).

This extended interpretation is justified by the fact that – as described by Burgoon et al. (1995) and as can be seen in the research aimed at studying the behavioral indices of interpersonal adaptation – what researchers would really be interested in is the concordance and attunement of subjective experiences. The behavioral approach of their research is generally methodologically based rather than theoretical in nature: Since subjective

experience cannot be accessed directly, researchers hope to draw indirect, yet valid conclusions by detecting behavior.

The approach of Lindsey, Colwell, et al. (2008) is similar; they defined the concept of *dyadic synchrony* when studying the interaction between adolescents and their mothers as “mutually responsive and reciprocal orientation between parent and child that includes elements of mutual focus, a balance of give and take, shared affect, and behavioral reciprocity” (p. 290). Synchrony can appear in several forms, including feelings and experiences; it is not restricted to behavioral characteristics.

It is worth considering that “emotional synchrony” – also called shared affect, mutual affect, and emotional reciprocity – actually indicates the harmony of emotional *expression*, behind which different emotional experiences may exist, depending on the display rules. Thus, concordance in this index does not necessarily mean harmony of *actual* emotions. For example, the participants of the given interaction may not express their disapproval, or their erotic attraction for that matter, because the given situation does not allow for this. Only if we can get data on the real emotional experience of the partners, can we have a chance of finding synchrony in this area as well.

In his comprehensive dynamic model of synchrony, Waugh (2002) also includes affective and cognitive elements in the concept of dyadic attunement. In his opinion, degrees of attunement between the interaction partners may appear from nonexistent to shared experience.

The new indices of synchrony should be applied not *instead of*, but *in addition to* the old ones. It must be made clear that if we deal with internal (but only consciously available) experiences as opposed to externally observable behavior, not only the methodology will require a different approach, but the possibilities of interpretation will also be different.

2.2. HYPNOTIC INTERACTION AND PHENOMENOLOGICAL SYNCHRONY

It is interesting to separate the behavioral and phenomenological levels in the areas of theory and research, too. In addition to making behaviorally based measurements dominating hypnosis research, it is worth studying subjective experiences in sufficient depth. The parallel analysis of these levels will be discussed later. Kihlstrom (2008) emphasizes that although modern hypnosis research concentrates on changes in behavior, “the overt motor behavior follows from the subjective experience” (p. 27). Yet, as we will see, one must be very careful when inferring internal processes from behavioral data considered being objective. The picture is highly varied when the subjective experiences of people exhibiting the same behavioral responses to hypnotic suggestions are revealed; in other words, different subjective experiences may lie behind the same objective response (Cox and Bryan, 2008).

Regarding human interactions in general (not only in reference to hypnotic interactions), Patterson (1976) and Hendrick (1990) point out that since nonverbal manifestations and patterns of behavior observed in the interactions may play different roles in the interactions, it would be premature to jump to direct conclusions from them regarding intimacy. Furthermore, as many researchers add, the differences arising from the different perspectives the observer and the agent have are also evident: The interaction or the relationship is surely

experienced differently by the participant and an onlooker (Duck, 1990). For example, Grammer, Kruck, and Magnusson (1998) analyzed the interaction between opposite sexed people who had not known each other previously, and found no relationship between the pattern of synchrony of motor behavior and the experiences of the participants (namely, how enjoyable the interaction was and how much they were interested in the partner). These considerations also suggest that in the research methodology to be used we should ask about the subjective experiences directly, and we should not be satisfied with indirect inferences to experiences drawn from some other variable measurement.

To put it more simply: The subject of the present work is to investigate the possibilities of studying and comparing the experiences of the members of a dyadic interaction regarding the given interaction. We all know from common everyday situations that one of the participants of a given dyadic interaction (e.g., a walk together or a conversation) finds being together pleasant and enjoyable, while the other one is bored and feels unpleasant. In such cases, evidently, the experiences are not in harmony. Fortunately, the opposite also happens often: you can probably also recall such pleasant, intimate memories, when the people in the interaction were on the same wavelength and think of the events of the occasion with similar feelings.

We can only agree with the argument of Barnier and Nash (2008) when they emphasize in the Introduction of their comprehensive handbook that “The most important and interesting aspect of hypnosis – the phenomenon to be explained – is the individual’s private experience of hypnotic suggestions” (p. 3), and later that “It is the subjective experience that makes the hypnotic state exceptional” (p. 11).

It is already worth thinking about how much more important and interesting it is if we study not only personal experiences, but the experiences of both persons (subject and hypnotist), especially, if there are related to each other.

Baker’s study (2000) guides the reader very vividly into the interactional approach of the experiential aspect of hypnosis when it says:

“The construction of the intersubjective field between hypnotist and subject or therapist and patient embodies a variety of dynamic processes that potentiate, inform, and construe the essence of hypnosis, the individual’s engagement and absorption in it, and its role in changing thoughts, feelings, and behaviors. From this perspective, the phenomenology of hypnosis may be viewed as arising from an interactive space that is bounded by the mutual rituals and constructions of ‘induction’ and contained within the mutually construed frame of research or psychotherapy but which simultaneously transitions and transcends the usual boundaries between inner and outer, experience and symbolization, autistic and shared, and perhaps even self and other.” (p. 56).

Chapter 3

MODELS OF APPROACH OF THE DYNAMIC CHARACTERISTICS OF RELATIONSHIPS

Several approaches are known for the explanation of the attunement of two persons (for excellent summaries, see, e.g., Burgoon, Stern, and Dillman, 1995; Werner and Baxter, 1994).

Behavioral sciences differ from one another along their *philosophical background* in many respects:

- a) What do they consider as the unit of analysis, the individual, the dyad, the group, or the system?
- b) What is their assumption regarding the changes (stability) of the phenomena?
- c) What is their standpoint in terms of the philosophy of science regarding the questions of determining factors, predictive power, objectivity of observation, and the generalizability of data?

The models concentrating on the enduring characteristics and personality traits of the individuals put the individual in the center of their study – evidently –, while changes and dynamics are not very pronounced. In this model, the behavior of the individual is organized in the interaction between his characteristic traits *and* the physical and social environmental elements.

The construct of hypnotic susceptibility is of key importance in hypnosis research; it is very stable, therefore, it is easily attracted in this direction: It is a consistent finding over and over again that people's susceptibility to hypnotic suggestions is characteristic of the individual, is stable, and changes only very rarely (Piccione, Hilgard, and Zimbardo, 1989).

Interestingly, dyadic research can be conducted within the frames of even this model, although it is done at the level of the individual. Research on attachment style belongs here, so do studies investigating the intimacy-needs of individuals or their ability to get others involved in intimate conversations. Similarly, the approaches that analyze individual measurements (e.g., attitudes toward something) with reference to each other post hoc and determine whether or not the values of the interaction partners match each other also belong here.

Among the studies concentrating on the individual (subject), but also related to the interaction, in the field of hypnosis research, this model is represented by, e.g., Lynn, Weekes, et al., (1991), Nash and Spinler, (1989), Perry and Sheehan, (1978), Sheehan, (1975, 1980), Sheehan and Dolby, (1979).

The approach of the **organismic** model is already dynamic and holistic, the individual and his environment (e.g., his interactional partner) affect each other mutually and reciprocally. Thus, in this case, the unit of analysis is the whole *system*, but the approach still assumes that the building units of the system can be analyzed independently of each other. It is important in this view that the elements of the system can be identified separately and their operation can be studied individually. Researchers with this perspective approach the studied phenomena from outside, “objectively”, striving for repeatability.

In the case of the **transactional** (dialectic) models, the whole system is in the center of study again, but it can no longer be divided into its constituent parts. The whole is not simply the sum of its parts. The studies analyze the constantly changing relationships of the whole unit in which each aspect may equally be decisive, and the events are organized in a coordinated and holistic way.

As opposed to the organismic approach, where the constituent elements can be identified exactly and keep their independence, here, the elements cannot be interpreted without each other and create a new quality of relationship. The temporal pattern and changes of events, the analysis of patterns and their modifications are key elements in this approach. The aim is not the detection of causal relationships, but the analysis of how the different factors fit each other and how coherent their pattern is.

This approach puts forth hypotheses regarding the profile of the variables and their changes, and does not limit itself to unfolding the chain of “cause and effect” interactions among the variables. It also follows from this that the patterns within the given system (e.g., the organization of the morning routine in a family) can be interesting “in their own right”, and it may not be the aim of the research to show results that can be generalized.

The models of interpersonal adaptation can be categorized on the basis of the broader **theoretical background** of the given model, too. Cappella (1994) declares several requirements for theories discussing mutual interactional responses. An adequate theory

- is sufficiently generalizable, it can be applied to all kinds of interactions,
- can explain various interactional patterns (reciprocity, compensations, matching, mismatching) on the same basis,
- can predict when and which pattern will arise,
- fits the other theories of behavior (control),
- does not mix up long term development of relationships with momentary interaction responses.

Based on the **focus of the theoretical background**, several approaches of interpersonal adaptation can be differentiated:

- 1.) The models that consider **biological** factors as fundamental, view *adaptivity* as essential, i.e., they emphasize that the ability to get attuned has an adaptive value, because it establishes the gratification of basic social needs, playing a vital role in the processes of attachment, security, and social adaptation.

- 2.) The group of theories **based on arousal or affect**, on the other hand, emphasize that our approach or avoidance tendencies toward other humans basically depend on our arousal and of affects. As it will be seen later, the present line of thought fits mainly this group of theories.

Affiliative Conflict Theory (ACT) assumes that the comfort feeling of the individual is based on finding an optimal balance between our affiliation needs, laying the foundations of approach, and autonomy needs, laying the foundations of avoidance. Social encounters disturb the homeostatic-like equilibrium, thus, a drive appears in the person to restore the balance.

The Bidimensional Model also builds upon the opposites of approach and avoidance, but it further assumes that the process is also fundamentally influenced by personality traits, forming the basis of our social behavior. The Bidimensional Model assumes that the quality of our social relationships is mainly determined by the harmony of the fundamental tendencies of the personalities in interaction.

According to the Arousal-labeling theory, the behavior of the interaction partner raises our arousal level necessarily, and the quality of this undifferentiated, heightened arousal, and thus, our avoidance or approach tendencies depend on the kind of cognitive label paired with this heightened arousal level. If the label is positive, reciprocal interaction pattern can be expected, if it is negative, compensatory pattern is expected.

The Theory of Discrepancy-Arousal proposes that the creation and progress of the above processes are influenced by the expectations with which we enter an interaction. The given events of behavior are measured against our expectations, and the extent of arousal caused by the difference between the two will determine the quality of the experience. Small or moderate changes in arousal are accompanied by positive experiences and activate a reciprocal activity pattern, but too much arousal arising from too large of a difference is unpleasant, thus, it leads to avoidance and elicits compensatory behavior.

The essence of the dialectic models is the conception that the complexity of interpersonal interactions cannot be forecast on the basis of simple predictions. According to the dialectic perspective of the model, the experiences of the partners of the interaction are shaped by their continuously changing needs and preferences; consequently, their behavior also varies continuously along the axis of avoidance and approach.

- 3.) The next group of models emphasize that **social norms** play a crucial role in the development of social behavior, because they set the limit of what can be considered as acceptable in the processes of the interactions. One of these norms is the requirement of reciprocity, which prescribes that the level of self-disclosure of one of the partners “must” be followed by the other person. The behavior is also influenced by social status, because this status affects the degree to which one has to conform to others, or to keep separate from them, and how much one is motivated to identify with the others.
- 4.) Certain models find how the interaction partners **communicate** with each other on the biological, psychological, and social fundament as the most important factor, and how they process the messages of each other.

- 5.) Naturally, there are models that aim at describing the regulation of interpersonal situations, i.e., that **integrate** all of the above factors in their explanations.

BOX 05. AFFECTIVE STYLES

Modern studies of neuroscience have confirmed the existence of affective styles (Davidson, 1998; Davidson, Jackson, and Kalin, 2000). Individuals differ in how fast subjective responses, behavioral reaction, and physiological concomitants are evoked in them in emotion-eliciting situations. Recovery time and decay time of these responses may also show individual courses.

It is well known that the emotional-motivational system is built on basically two subsystems, on the **approach** system and the **withdrawal** system.

The **approach** system calls for *appetitive* behavior, and can be characterized by positive emotions that accompany approach (enthusiasm, pride, pleasure). This system is usually active if the individual is striving for a previously desired goal, for example, a hungry individual is approaching food. It must be noted that it is not easy to carry out this simple act in reality; several elements are necessary for its successful completion. One needs the representation of the goal in the working memory (dorsolateral prefrontal cortex), the reinforcement contingencies subsequent to behavior must be modeled and represented continuously (medial prefrontal cortex), the abstract goal must be “translated” to specific and direct actions (basal ganglia), and one must consider and evaluate one’s motivational state continuously (nucleus accumbens). High rate of firing can be recorded in the latter area at the time of expecting “reinforcement” (Davidson, Jackson, and Kalin, 2000). Interestingly, two different positive emotional states can be related to reaching the goal: *pre-goal* attainment and *post-goal* attainment. In the course of consummation of the goal, the nucleus accumbens exhibits a decelerating rate of firing; this state may go together with the feeling of “satisfaction”.

There are individual differences in the tone of the approach system; this means that the individuals differ in the extent they experience positive feelings associated with approach. Furthermore, people also differ in how much they can switch to positive feelings of *pre-goal* and *post-goal* attainment.

In addition to the approach system, there is also a **withdrawal** system in the negative situations. In cases of aversive stimuli, the signs of the emotions of fear (via the amygdala) and disgust (via the modulation of the insula) typically appear. In humans, these activities can be seen in the right hemisphere more intensively.

In general: There are stable, consistent differences among individuals whether it is their right or left prefrontal activation that is greater. This is true of both baseline and the various emotion-eliciting situations. People whose left frontal activity is stronger tend to report positive feelings, as opposed to those with dominant right frontal activity, who show a preponderance of experiencing negative feelings. In the cases of right-sided preponderance (with the dominance of negative feelings), a lower level of NK-cells was recorded (in humans), that is present in negative, stressful situations; higher cortisol level was also found in rhesus monkeys. The latter difference could be found in experimental animals for years (Davidson, Jackson, and Kalin, 2000).

The prefrontal cortex plays a fundamental role in the temporal course of the negative emotional experience arising upon the aversive events, especially in its persistence and decay. The prefrontal cortex ends the negative (fear) effect by inhibiting the amygdala; in the absence of this frontal effect, the amygdala maintains its excitatory state and the corresponding aversive response continuously. The prefrontal cortex also plays a part in maintaining the representation of the contingency of behavior-reinforcement in the working memory (which, as we have seen, has a key role in approach).

It follows from the above that affective style shows a pattern characteristic of the individual; it always works accordingly: In case of predominance of fear, its working style is withdrawal; in case of positive dominance, its typically style is approach.

It must be noticed that there is a “flexible” element in each model, that determines if a pattern of reciprocity or that of compensation can be expected in case of meeting some conditions. This flexible element can be the outcome of the approach-avoidance forces, the nature of labeling (positive or negative), the actual level of arousal as compared to the expected level, or the range of acceptance where one lives (Cappella, 1994).

3.1. THE FRAMEWORK OF THE PRESENT APPROACH

The second group of the above models of the regulation of interactions (arousal-based and affect-based explanations) can simply be outlined as this:

Change in arousal \Rightarrow affect \Rightarrow behavioral response

Namely, the model directs attention to the process in the course of which the change in arousal in a social environment brings about affective changes that lay the foundations of behavioral responses. Essentially, the difference among the models in this group is what exactly they attribute the change in arousal to. In other words, the different models conceive different factors as the first link in the chain of causes, e.g. increase of intimacy, or expectations based on preferences and personal relationship history, etc. It does not distort reality to say that empirical studies usually concentrated on the last link in the chain, i.e., on behavior, neglecting the preceding links, postulating only theoretical considerations regarding those links.

The approach represented in the present work on dyadic interactions is novel as compared to the previous ones in that it does not focus only on the last link – behavior –, but attempts to gather data on the previous links of the chain, i.e., on feelings and subjective experiences. At this level of research, however, we do not undertake revealing causal relationships; rather, the aim of the present work is the descriptive analysis of the data and their interpretation.

Nova Science Publishers, Inc.

THE METHODOLOGY OF STUDYING INTERACTIONAL SYNCHRONY

Although research into interactional synchrony has a history of several decades, it still lacks uniformly followed standard methodology. Naturally, this is partly due to the absence of conceptual clarity, as we have seen in the chapter on the concept of interactional synchrony. The majority of the classical studies concentrated on nonverbal behavior (Cappella, 1997; Bernieri, Davis, et al., 1994; Bernieri, Gillis, et al., 1996; Bernieri, Reznick, and Rosenthal, 1988) and looked for its relationship with other variables.

The study of interpersonal coordination had basically two directions: (1) the methods of *behavioral coding* or *microanalysis*, and (2) the methods of behavioral rating or behavioral judgment (Biró, 2004; Biró and Bányai, 2007; Cappella, 1997).

Researchers following the microanalytic method of coding analyzed, e.g., natural dyadic interactions heroically, coding from frame to frame how the direction or speed of the participants' movements changed. This method is also suited for finding a relationship between certain behavioral elements of the two participants at a alter time. For example, it has been shown that the movements of the participants of a social interaction and the rhythm of their nonverbal manifestations are in harmony with their own speech on the one hand, and with the rhythm of the verbal behavior of the interactional partner on the other hand (Condon and Sander, 1974; Condon, 1982; Kendon, 1979; LeFrance, 1982; McNeill, 1992). Recent studies have confirmed Condon's early works (Wiltshire, 2007).

Although the studies of Condon and his group in the 1960s received much criticism – because they did not check if the perceived synchrony was above the expected chance level or not –, they are still considered as the pioneering works of the phenomena of interactional synchrony (Cappella, 1994). Taking heed of the early criticisms, when investigating the synchrony between newborns and adult speakers, Condon and Sander (1974) already used the procedure of matching the microanalytic data of a different speaker to the given infant as a control. It could be demonstrated this way that the concordance between the infant's behavioral manifestations and the rhythm of the speech is far from being random or incidental.

Regarding interactional synchrony, Argyle (1988) also acknowledged that people finely attune their interactions to each other along subtle rules, but it is very difficult to grasp this scientifically. We must pay attention to the criticisms of those interactional studies where any

behavioral manifestation of either of the partners was found to be in synchrony with any behavioral manifestation of the other (sometimes the number of the studied included as much as 18 body parts), analyzing the video recording frame by frame. The critics of this approach pointed out that it is possible to find concurrences due to chance alone from such a vast amount of data, therefore, it much be checked even more strictly if the synchronous phenomena found is above or below chance level.

It was a milestone in the development of the methodology when Bernieri and his group simply entrusted untrained observers or raters to judge the absence, presence, or degree of synchrony (Bernieri, 1988, 1991; Bernieri, Reznick, and Rosenthal, 1988; Bernieri and Rosenthal, 1991; Bernieri, Davis, et al., 1994; Bernieri and Gillis, 1995; Bernieri, Gillis, et al., 1996).

BOX 06. SOME COMPONENTS OF GAZE

The visual channel, which is of utmost importance in social interactions, is a favorite field of study of research. In contrast with everyday interpretations, researchers have developed a wide array of indices in seemingly simple situations like two persons enter an interaction in which they look at each other. The following table summarizes some of the components of gaze (after Argyle, 1988, p. 153):

Table box 6.1.

| Name | Description |
|--|--|
| Amount of looking at the other | How much one looks at the partner in proportion of the time spent together |
| Mutual gaze (eye contact) | Both partners look at the other |
| Gaze while talking, gaze while listening | If one of the partners talk, how much time does talker and the listener look at the other |
| Glance | "Quick", 2-3 seconds long glances, e.g., for emphasis |
| Mutual glance | Both partners glance briefly at the other (1-2 seconds) simultaneously |
| Fixation pattern | A pattern detected by a special instrument that draws a picture of who looks at which point (e.g., on the face of the other) |
| Pupil size | Usually, an unconscious element, the size of the pupil of the other |
| Expressive look | Typical looks accompany certain emotional states |
| Direction of looking away | Where do we look when we look away from our partner? |
| Ratio of blinking | Amount of blinking per unit of time |

Similarly to the previous judgments from frame to frame, this global method also proved to be reliable in the measurement of *posture similarity* and *movement synchrony*, but is much less laborious and time-consuming.

The global method proved to be successful in judging so called *pseudointeractions*. Two arrangements are used in this method of analysis. In the so called *internal pseudointeraction*,

using a split-screen generator, the recording of the dyad is manipulated so that the record of one of the partners is temporally shifted from that of the other. Thus, the original participants can be seen, but in a desynchronized manner. In the so called *external pseudointeraction*, the images of participants who had never met are combined into one clip. Judges rated the genuine interactions to be more coordinated than pseudointeractions (see e.g., Bernieri, Reznick, and Rosenthal, 1988).

The validity of such types of analysis was shown by the study in which a positive relationship was found between interpersonal attraction and movement synchrony in a natural situation where opposite sex members of a dyad met for the first time (Sakaguchi, Jonsson, and Hasegawa, 2005).

It can easily be seen that the research methodology of interactional synchrony is in close relationship with the conceptual background of theories and conceptualizations regarding this sphere of phenomena. At the level of theorizing, a new view gained ground, namely, that simultaneous, multidirectional, and multifactorial interactions develop between the partners of the interaction; it seems obvious that a shift in theory must be followed by a shift in methods. The methodology in connection with the view that assumes interactions must grasp interactions in the process of interaction, i.e., it has to study the various factors of the interaction simultaneously, and along the events of the interaction. Cairns (1979, p. 206) says in his methodological summary: "Interactional methods are not merely an option available for the contemporary study of social patterns: they are required".

Nonverbal communication can be interpreted almost exclusively in an interpersonal context; therefore, the unit of analysis becomes the dyad instead of the individual. This has a number of consequences. For example, *Dyadic behavioral units* have to be determined and measured, *sequences* of nonverbal signals and responses to them have to be analyzed, it has to be understood how the nonverbal behavior of one of the partners is related to how the other partner interprets it (usually unconsciously), etc. (Burgoon, 1994).

The significance of the interactional approach is highlighted by Hatfield, Cacioppo, and Rapson (1994) when they point out the general human characteristics that we tend to adopt the behavior of others automatically, which has an effect on both our physiological and emotional states. Davis said as early as in his 1979 (!) study that there had already been a change in perspective in behavior research, shifting attention from the individual to the social. If this change in perspective had really taken place, it would have meant that the most modern research methods would have caught up with the truism that "man is a social being". In my opinion, however, no general breakthrough in interactional approach could be seen either in 1979 or even today that would have practical consequences; the methodological shift is especially absent from the study of adult-adult interactions. I think the perceptible slowdown in translating the change in perspective to practical application is caused primarily by methodological difficulties; therefore, it is important to expand psychology by simple testing situations and by methods that tap phenomena of interactional synchrony in a manageable way.

It is worth noting that although the breakthrough from the individual to the interaction is still awaited in many places, the conceptual framework of the study of interpersonal phenomena can move at many levels. E.g., Scheff (1997, p. 54) differentiates several levels of investigation along which human behavior can be studied:

Part/whole ladder*Concrete level*

1. Single words and gestures.
2. Sentences.
3. Exchanges.
4. Conversations.
5. Relationship of the two parties (all their conversations).
6. Life histories of the two parties.

Societal level

7. All relationships of their type: i.e., the therapist-patient, man-woman, etc.
8. The structure of the host society: all relationships.
9. The history and future of the host civilization.
10. The history and destiny of the human species.

Of the above levels, our studies regarding hypnotic interactions can the most often be characterized by level 5: we analyze the *relationship* between two persons. Naturally, this can be related to their life histories (level 6), sometimes we take an outlook at the lessons that can be learnt in general regarding similar relationship types (level 7), and this makes it possible to think further in the direction of the expanding levels (sometimes we do this indeed). The lower rungs of the part/whole ladder, however, are usually not explored by direct analysis. We ask the members of the dyads to make direct judgments about the given relationship and the experience they had in the interaction.

Scheff (1997) points out that researchers usually “fritter away” the phenomenon at hand with their approach (i.e., they move along the lower rungs of the ladder), while theorists tend to concentrate too high up, on the “whole”. Conducting studies in the middle rungs of the ladder, we may, perhaps, bridge the gap between these two extremes.

The phenomena of interactional synchrony can be made measurable (can be operationalized) in several ways (Bernieri, Reznick, and Rosenthal, 1988; Bernieri and Rosenthal, 1991):

- a) The interdependence or harmonization of the behavioral or physiological **rhythms** of the interaction partners (two or more persons) can be detected;
- b) The **simultaneous** manifestations of the interaction partners (two or more persons) can be followed (verbal and nonverbal behavior, i.e., body posture, body movements, and emotions, attitudes, subjective experiences).
- c) We can observe the degree of **harmony** of interpersonal behavior.

From a methodological aspect, each of the above listed possibilities of operationalization is difficult. Looking at the literature, it can be seen that the research methods applied even in the study of the behavioral characteristics of interactional synchrony have gone through changes. We have seen that the dominance of research using microanalysis was supplemented by the method of holistic judgment of interactions. It is an interesting development that the changes in these methods had an effect on the definition of synchronous phenomena itself,

too: In this new approach, it is simply the degree of harmony or match that is attributed to the interaction by the judges (Bernieri and Rosenthal, 1991; Biró, 2003, 2004). It is important to notice in this approach that the “judgment” of synchrony is based on the impressions of the raters, and the experiences of the participants themselves are not taken into consideration. Cappella (1994) and his laboratory demonstrated that the synchrony identified by groups of observers is highly correlated with “real” behavioral synchrony, i.e., a simple group method proved to be valid. This is good news, but we still do not know anything about how the participants themselves experienced the interaction.

The idea may come naturally that interactions can be characterized not only by observers, but by internal experiences as well. Brehm (1985) considered self-report as one of the most important methods in the study of intimate interpersonal relationship, and emphasized the following aspects in the course of categorization:

- 1.) **Retrospective vs. concurrent** methods: The differential element is whether the report comes after or simultaneously with the interpersonal event.
- 2.) **Global vs. specific** approaches: The question is whether the method asks questions about some specific aspect or allows the participant of the interaction to report freely about his experiences under the guidance of some general instruction.
- 3.) **Subjective vs. objective** orientation: The primary question is whether indefensible and indisputable subjective experiences are allowed, or only those facts and events are asked for that can be checked by objective methods.

According to the above classification, the methods used in our own research and shown in the present volume can be categorized as retrospective and subjective, but regarding their comprehensiveness (global vs. specific), they are not uniform; some of the methods ask for specific aspects of the experience, some others ask for much freer reports of the experiences.

Nova Science Publishers, Inc.

THE FUNCTION AND CONSEQUENCES OF INTERACTIONAL SYNCHRONY

It is enough just to review the research areas of synchronous phenomena to realize that interactional synchrony and its related phenomena are fundamental in the emotional communication within the interactions (Hatfield, Cacioppo, and Rapson, 1994), in the development of the mother-child relationship (Beebe, Gerstman, et al., 1982; Bernieri, Reznick, and Rosenthal, 1988; Gratier, 2003; Isabella, Belsky, and von Eye, 1989; Isabella and Belsky, 1991; Field, 1985; Korman, 1982), in the teacher-student relationships (Bernieri, 1988), in intimate interactions (Field, 1992); in fact, perinatal psychology has already been analyzing interactions before birth (see, e.g., Golanska, 1992; Feldman, 2007b), and special attention has been given to the synchronous phenomena of premature babies in critical state and to those of twins.

5.1. THE ROLE OF INTERACTIONAL SYNCHRONY

Attunement between individuals may have many **functions** (Pelech, 2002). Most commonly, it conveys the experience of *bonding* to the members, increasing their feeling of security this way. It leads to a feeling of comfort if we are in synchrony with someone or with many other persons. More explicitly: Interactional synchrony has a *regulatory function* in interpersonal processes. According to the findings of infant-mother studies, the infant may communicate toward its caretaker to “continue” the given activity by its synchronous behavior, while behaving in a dissynchronous way the baby communicates that it has had enough of what is happening.

The presence of interactional synchrony in adults also shows a correlation with the perceived rapport. People in synchrony with each other experience greater degrees of rapport (Cappella, 1997; Urbán, 1996, 2002). Several theorists have reached the conclusion that interactional synchrony plays an important role in increasing the *viability* of a relationship.

Everybody can be characterized by a biologically determined internal rhythm that also affects his activity and communication (e.g., speech tempo, gestures). At the same time, we

tend to deviate from our individual pattern in social situations. Detailed analysis of natural interactions made it clear that interaction partners coordinate their verbal and nonverbal manifestations in an extremely subtle way (Atkinson and Heritage, 1984). It is especially interesting that a) this system rules is not conscious (or only very rarely, and even then only some of its elements come to awareness), yet the partners conform to it, and that b) involvement in the interaction itself is not conscious, either (Heath, 1984).

People like to be in connection with people whose internal rhythm is similar to theirs. In the course of an interaction, people harmonize their rhythms, so their activities and manifestations become more and more coordinated. This mutual entrainment is especially important at the beginning of the relationships; more mature relationships tolerate (or maybe even desire?) lower degrees of accommodation. Several authors emphasize how fast this process is: Partners who had never met before are able to get attuned to each other literally within moments (see, e.g., Argyle, 1990; Niederhoffer and Pennebaker, 2002), automatically, unintentionally, and even human babies are able to do this immediately after birth (Meltzoff and Moore, 1977). Already the early results of interactional synchrony research demonstrated that a few days old human neonate is able to keep in synchrony with an adult talking to him for a long time, for even as long as 125 word-sequences (Condon and Sander, 1974; Condon, 1982). Microanalysis of the interaction among mother-child-father triads could demonstrate that a three month old infant can already follow the interactional patterns of his parents. The baby notices when the parents' gaze prepares them to switch who will tend to the baby, and the infant will show interest toward the new partner within 10 seconds (Feldman, 2007a). It was striking at the analysis of the interaction between five months old infants and their parents that the mother-daughter dyads show a different pattern of synchrony than do the father-son dyads: The former ones were characterized by synchrony related to social stimuli, in the latter cases, however, synchrony was related to the intensity of positive emotional states (Feldman, 2003).

Chartrand and Bargh (1999) pointed out that the whole chain of the attunement process runs its course automatically: In the course of perceiving the other, the social stimulus is categorized and *interpreted*. The outcome of this interpretation activates the *behavioral* schema of the observer, since perception and behavior are both built upon the same system of representations. All this takes place automatically, that is, it does not require – and does not allow for – effort or conscious control¹.

The tendency for coordination is so strong that it appears even with partners who – as confederates in an experiment – do not keep eye-contact, do not smile, and show no special interest in the “naïve” experimental subject. “Humans are biologically prepared to engage in coordinated interactions” – says Feldman (2007b, p. 341) on the basis of her extensive research in the field. It is an exciting question to what extent **monotropy** prevails in this area: How much is the biological preparedness of the child limited to attachment to a single person, and how much is a parent able to form attachment with more than one child simultaneously (Feldman and Eidelman, 2004). We will return to this question later, when analyzing the hypnotic, and especially the hypnotherapeutic relationships.

¹ Chartrand and Bargh (1999) explicitly linked the phenomenon with the concept of “ideomotor response” as described by William James (1890) and with that of hypnotic suggestions. According to this, we are automatically inclined to display our thoughts in overt responses. In the case of hypnotic suggestions, the “thought” comes from outside, from the hypnotist, while the subject automatically performs it through the temporary relinquishment of voluntary control.

The phenomenon of interactional synchrony thus plays a fundamental role in the lives of individuals and groups. In the case of animals that live in groups the coordination of the movement of the individuals is essential in many places from the swim of fish to the flight of birds. In humans, the increased rapport and liking based on coordination may serve the basic need of belonging. Belonging is considered as a basis need: There is a strong drive in adults, too, to maintain close, long lasting, positive, and emotionally committed relationships (Baumeister and Leary, 1995; Chartrand and Bargh, 1999).

Murray and Trevarthen (1985) reported a study where the mothers were in interaction with their infants of 6-12 weeks of age. At the signal of the experimenter, the mothers had to adopt a "blank face", that is, they intentionally refrained from any emotional expression. As compared to the period with normal play and expression, the infants showed signs of distress: They became tense and showed fewer gazes toward the mother. However, when the researchers played back the video of the mother from the normal play part of the session (and with lively face) to the infants, the children became distressed again: Although the mother behaved normally on the video, her behavior was not in synchrony with the infant watching her on the video. It turned out this way that it is not the emotional charge of the partner's expression that is important (at least initially), but the *harmony* between the observer's experience and the partner's behavior. In small children, therefore, the presence or absence of synchrony is the main regulatory factor.

Isabella and his colleagues (Isabella, Belsky, and von Eye, 1989; Isabella and Belsky, 1991) demonstrated that infants who showed greater synchrony with their mother at a few months old of age, belonged to the *secure* attachment group at a later testing (at age 1 year), as opposed to the children of the asynchronous mother-child dyads, who were later classified into the *insecure-avoidant* or the *insecure-resistant* categories. According to Lundy (2003), the role of synchrony is the **mediation** of the security of attachment and the degree of *mind-related comments*. The latter index shows how often the parents, in free interactions with the child, make remarks that indicate that they look at the child as a being with a *mind* (e.g., *Have you already figured it out? What were you thinking about? You like it, don't you?* etc.).

Behavioral mimicry is subject of extensive research. The behavior of the interactional partners has been studied in many laboratory situations from this respect. Usually, one of the partners is a confederate, who has to move in accordance with a previously determined script (e.g., cross her legs, copy the partner's behavior intentionally, etc.); the researchers study the behavior of the "naïve" person under these circumstances. The studies have shown (for a summary see Lakin, Jefferis, et al., 2003) that behavioral mimicry increases

- if the person receives an instruction to cooperate,
- if words implying cooperation and belonging are used as subliminal priming before the interaction (e.g., affiliate, friend, together),
- if the situation is manipulated so that the person cannot cooperate with the partner well: In a subsequent possibility of cooperation collaboration increases,
- if, based on a pseudo-personality test, the persons are given a false feed-back saying that their personality profile is distinct,
- if the person is made to believe that the group excluded him,
- if more personal (non-superficial) topics arise in the course of the interaction,

- if the person is high in self-monitoring,
- if empathy tests show that the person is especially good in picking up the other's perspective.

On the basis of all this, the **evolutionary role** of mimicry – and of coordination in general – is revealed. The life circumstances of our ancestors required to meet the everyday challenges in close cooperation: from the acquisition of food through creating safe shelter to bringing up their offspring. The correct perception of the behavior and intentions of the other facilitates the effective organization of one's *own* behavior. Those who were good at this interpersonal cooperation increased their chances for survival. Thus, behavioral mimicry was partly a communicational instrument, partly it mediated affinity (more and more), serving as *social glue* (Lakin, Jefferis, et al., 2003). Thus, behavioral mimicry both mediates-and-reflects, and creates-and-increases rapport between the interacting partners.

In opposition with this circular reasoning, Chartrand and Bargh (1999) assume a straight causal link. In their opinion, the perception of the other and one's resulting behavior cause emotional harmony, empathy, and increased rapport.

5.2. THE CONSEQUENCES AND IMPLICATIONS OF THE PRESENCE AND ABSENCE OF INTERACTIONAL SYNCHRONY

According to the interpretation of the “coordination-rapport” hypothesis of interpersonal coordination, several interpersonal characteristics are correlated with how the participants perceive the degree of coordination: for example, attraction, satisfaction, attachment, longevity, and rapport (Cappella, 1997).

A number of laboratory studies show that in cases of higher levels of mimicry – or in a general term: coordination – the participants like each other better, find the other more attractive, describe their interaction as smoother and more harmonious, and the interactions are longer lasting than in the cases of lower levels of mimicry.

The social biofeedback theory of Gergely and Watson (1996, 1999) says that the “marked” (exaggerated, segmented by pauses) feedback about the child's emotional expressions by the caretaker helps the child first to identify, then to regulate its own internal states. For this, the caretaker has to be in synchrony with the signals of the child, and also, the attention and the contingency-detecting readiness of the child has to be able to relate the mirroring signals of the adult to its own signals. Thus, there is a process based on a complex synchronous phenomenon here.

Vandenberg (1998a, 1998b) makes it clear that the harmony with the caretaker is essential in human children, and that the consequences of its absence are severe: Growth delay, listlessness, dysphoria may characterize the child, which may lead to mental retardation and even death. He makes a direct comparison with hypnosis:

These consequences express the ontogenetic foundation of relationship and influence on which the hypnotic dyad is presumably based. Caregivers, then, serve as external, executive surrogates for their infants, joining them in intersubjective mutuality;

regulating their physical conditions, their bodily functions, and their emotional experiences; placing their communications within a richer, cultural context of meanings; aiding them in acquiring the expressive gestures and vocalizations for accurate and appropriate communication; grounding meaning; and affirming being (Vandenberg, 1998b, p. 338).

No matter how helpless a human baby may be, it contributes its share in making its caregiver to care for him/her. Argyle (1990) emphasizes that attachment to the primary caretaker, seeking physical contact, “demanding” attention, help, and care are universal characteristics of human offspring, observable in every culture.

The review by Harrist and Waugh (2002) links several functions to infant and early childhood synchrony, all of which are essential elements of balanced development:

- 1.) It promotes *multisensory processing*. Children process the stimuli from the different sensory channels simultaneously, in relation to each other. The material from one channel facilitates the evaluation of the stimulus from another channel. The most obvious example is that the visual stimulus of the mother’s face is processed together with the auditive pattern of her voice. It is advantageous for this multisensory processing if it can be practiced in a dyadic synchronous situation, because in this case – at least ideally – the stimuli come clearly, persistently, and predictably.
- 2.) It supports *homeostatic regulation*, both at the physiological and at the affective levels. The homeostatic regulation of the child in the first few months of life definitely depends on the activity of the caregiver, then the child gradually learns to regulate his/her physiological and affective processes better and better. The child learns to control the levels of internal and external stimuli and the resulting level of arousal. In dyadic synchrony, the caretaker can adapt to the child’s current individual need much better and homeostasis can be maintained subtly and smoothly.
- 3.) It helps to achieve the *experience of effectance*. In case of dyadic synchrony, the child has a good chance of experiencing its own effectance. The child’s activity and actions elicit responses from its environment, the child’s self-initiated action patterns have a good chance for running their course, no stress or other unexpected or unpredictable events interrupt them. It is especially significant in this process that the child can experience that the absence of synchrony turns into the development of synchrony. The reparation of the mismatch is an important experience.
- 4.) Facilitation of *secure attachment*. The situations of dyadic synchrony lead to the experience of secure attachment in the child. The caretaker who pays attention to the child, understands its signals, satisfies its real needs, and who is able to see things from the perspective of the child, will offer the experience of “secure attachment” to the child: “They are paying attention to me, they understand me, I am given responsive care”.

It is noteworthy that all these functions can take place in hypnotic situations, too.

The hypnotized person can compare the internal images arising upon the words and suggestions of the hypnotist with his/her actual bodily sensations (multisensory processing); under hypnosis, there is a good chance that homeostatic control returns to the optimal zone;

the subject enjoying the special attention of the hypnotist soon experiences how significant even the slightest of his/her stir is (experience of effectance), and all this (usually) goes together with the general feeling of security both with respect to the given situation and in general. Often, this experience alone may be corrective, for the hypnotic relationship may be the first one of such a positive interaction for the given person.

The verballity of the hypnotist is of particular importance in this process, because this way the hypnotist gives meaning and interpretation to the subject's feelings, experiences, and motives. This "social biofeedback" (Buck, 1990) is especially significant in the case of alexithymia, where the inability to put one's feelings into words is in the background of the symptoms (Nemiah and Sifneos, 1970).

There is a tacit expectation between the interactional partners **to coordinate their levels of intimacy**. If one of the partners start a deeper, personal self-disclosure, it is "proper" for the other partner to return this. If this is uncomfortable for him/her, or does not wish to do so for any other reason, it is communicated to the first partner by nonverbal signals (Burgoon, 1994).

It is also very important how partners (e.g., spouses) coordinate the *intensity of their feelings*. Research has shown that in well-functioning relationships the positive statements match each other, while in dysfunctional couples the negative ones do so (Werner and Baxter, 1994). Even if there is tension between the partners, well-functioning partners mutually acknowledge (validate) the other's arguments, while less fortunate couples mutually complain and talk to each other in an unresponsive manner.

Niederhoffer and Pennebaker (2002) analyzed the texts of partners communicating with each other under laboratory conditions and in natural situations; they determined the degree of synchrony of the texts on the basis of various linguistic indices. The evaluation of these interactions – evaluated either by the dyads themselves or by independent observers – did not reveal a relationship with the level of linguistic synchrony. They concluded on the basis of this finding that coordination is related to *engagement* rather than to *rapport*. They attributed the relationship with *rapport* in previous investigations to the fact that those studies usually examined partners cooperating in a *positive medium*. The authors argue that the more engaged someone is with the other, the more coordination can be expected between them, regardless of the pleasant or unpleasant nature of the interaction.

5.3. THE IDEAL LEVEL OF INTERACTIONAL SYNCHRONY

For a long time, analyses regarding synchrony suggested that the greater the synchrony in an interaction, the better for the interaction. This is supported by the fact that the social norms require the coordination of the behavior of the partners in many instances (e.g., it is proper to smile, to return a greeting, etc.), all the way to coordinating the degree of self-disclosure (Biró, 2003). Many rites of groups of people living together contain elements where the music and dance enjoyed together harmonize the behavior, experiences, and even state of consciousness of the partners, strengthening this way the attraction among the group members (Csányi, 1999).

BOX 07. COMPARISON OF SYNCHRONOUS AND DYSSYNCHRONOUS INTERACTIONS

In order to characterize the interactional patterns of *discordant* dyads and families, Waugh (2002) introduced the concept of *dyssynchrony*. It refers to the situation where interactions are recurrently and systematically characterized by some unfavorable phenomenon: e.g., violence, intervention, or hostility. Thus, it is not a situation that occurs in simple and normal (healthy and adaptive) interactions where the usual harmony or synchrony disappears from time to time.

There are common features of synchrony and dyssynchrony, like the common focus of attention (it is another issue that the partners interpret the object of attention differently in dyssynchrony). It is another common feature that both of them are the contingencies of the antecedent behavior of the partner – at least that is how they experience it. In dyssynchrony, however, an onlooker generally cannot see the relationship between the elements of behavior, because, for example, one of the partners reacts to a much earlier event with a “delay”.

Nevertheless, the differences between the two are more prevalent, as summarized in the table below:

Table box 7.1. Comparison of synchronous and dyssynchronous interactions

| | Synchronous interactions | Dyssynchronous interactions |
|---|--|--|
| Valence of affect | Positive (e.g., pleasantness, enjoyment) and mutually affiliative behaviors | Negative (e.g., hostility) and mutually aversive, coercive behaviors tend to predominate |
| Perspective | Partners tend to attune and respond to each other sensitively | Partners tend to focus upon themselves, with little regard for the wellbeing or perspective of the other partner |
| Balance | Involve interactional participation that is balanced between the two partners (e.g., turn-taking, activity levels, engagement levels, roles) | Involve uneven, highly imbalanced, asymmetrical interactions, with one or both partners attempting to direct and dominate the course of interactions |
| Modulation of the levels of affect and arousal | Both partners tend to be within an “optimal” and sustainable range | Exceed greatly the tolerance limits of one or both partners, sometimes for prolonged periods of time. |
| Coordination and controllability | Partners sensitively attune and reciprocally respond to one another, the interactions are smoothly coordinated | Disturbing, rapidly unfolding interactions |
| Nature of interaction | May appear to be mutually adapting and coordinating like a rhythmically synchronized dance | Can escalate into an uncontrollable, sometimes tragically hostile, cacophonous melee |

All in all, many things point in the direction that a high level of synchrony or coordination is “the norm”. However, we can analyze this question more subtly than that.

In *early* mother-infant relationship, a high level of synchrony may really be significant. This is implied by data finding a positive correlation between the level of interactional synchrony between mother and infant and secure attachment of the child at one year of age (see, e.g., de Mendonca, Cossette, et al., 2011). In cases where synchrony is greater between mother and child, the children are more obedient (Wahler, Herring, and Edwards, 2001), their social and cognitive development is more advanced (Barber, Bolitho, and Bertrand, 2001), their IQ is higher, their self-regulation (either carrying out instructions or inhibiting initiated behavior) is better, and their use of words that reflect internal states (e.g., I feel, you think, etc.) is more frequent at age 2 (Feldman, 2007b).

Secure attachment is correlated with better developed social competence, intellectual curiosity, with greater persistence in problem solving, and more highly developed symbolic play (Lundy, 2002). Securely attached children are more curious, their problem solving skills are better, and they tolerate frustration better than their peers with different attachment styles (Biró, 2003, 2005). The relationship was supported from the opposite direction, too: As compared to healthy mothers, depressive or anxious mothers exhibit either exaggerating or withdrawing behavior toward their children; these extremes make harmonic synchrony more difficult to develop (Feldman, 2007a). Lower levels of mother-child synchrony was found in the background of hyperactivity, too (Keown and Woodward, 2002).

Feldman (2007b) and her group found in their longitudinal study that the degree of synchrony between 3 months old infants and their mothers had a direct predictive power on the level of *empathy* and *moral cognition* in adolescence. Lindsey, Colwell, et al. (2008) studied the interaction between adolescents and their mothers and found that dyadic synchrony was related to the child’s adjustment at several points. Adolescents who exhibited greater dyadic synchrony with their mothers had higher self-esteem and gave higher prosocial behavior values with their peers than those who showed less dyadic synchrony with their mothers.

According to the authors, the transfer from the interaction pattern of the mother-child relationship can take place in several ways: Dyadic synchrony may contribute to *secure attachment*, and by thus creating a more advantageous working model, it may facilitate the prosocial nature of the child’s peer relationships. The authors also find it plausible that the child *transfers* the interaction experiences from the synchronized mother-child relationship. Participating in a synchronized social interaction lays the foundation of later empathy, taking the perspective of the other in moral decisions, accepting the arguments of others, accepting criticisms, and of working out a recommendation for a solution that takes into consideration the needs of the other party, too.

The possibility arises, however, – not discussed by the authors – that there is no causal relationship between the synchrony with the caretaker and the more favorable indices later, but that they all develop on the basis of some fundamental characteristic – e.g., adaptive capacity – more favorably in some children than in others.

According to Feldman’s model (2007a, 2007b), interactional synchrony, the temporal coordination between mother and infant lays the foundation of the capacity for intimacy, symbol use, empathy, and the ability to read the intention of others. According to his analysis, the attunement between mother and infant begins already in the third trimester of prenatal development by the coordination of the *biological rhythms* of mother and fetus. The inborn

contingency detection capacity of the human newborn makes it possible to detect the patterns present in the behavior and emotional expression of its environment, especially those of its mother, and to perceive how these patterns fit each other. The coordination of *behaviors* appear in the first few months of life, thus, physiological regulation is transformed into *coregulation* (as far as the parent is concerned). Parent-child synchrony when the child is 3 months old is manifested in mutual gaze, covocalization, facial expressions and affectionate touch. It is Feldman's remarkable thought that as a few months old human baby is not capable of locomotion or of manipulation, its only possibility for keeping an active contact with the world is social coordination.

As the child reaches the age characterized by intersubjectivity, at around the 9th month, its social interactions become more mature, and 'give and take mutuality' begins to characterize its social behavior. Then, at around age 1, the child begins to use symbols at the level of gestures and words, which he can use in the area of social coordination for the rest of his life. Feldman (2007a) points out that many of the conditions necessary for symbol use are rooted in early mother-child relationship. The acquisition of symbols takes place in an interactive context: the initially non-symbolic imitation games become increasingly independent of the social context. Symbols develop upon the repeated occurrence of similar experiences by way of the mental acts of *substitution* and *referencing* (not yet active in small children). The interaction with the caretaker is necessary for the child to become – on the basis of the appropriate differentiation between self and the other – more and more capable of expressing affective-behavioral patterns symbolically.

The essence of the process is that the levels build upon each other: We arrive from *biological* rhythms through the coordination of *behavior* and through *social* mutuality to the highest level of development, to the synchronized use of *symbols*.

In this development, the biological and behavioral regulation of the child is built upon *external factors* at the beginning; in fact, we can say that it *depends* on them, for the immaturity of the human infant makes it vulnerable to external regulating impulses. This is provided mainly by the psychical proximity, touch, and interactive behavior of the mother. This provides the basis for a possibility that accompanies us for the rest of our lives, namely, that we build the regulation of our own physiological processes on the *external regulatory function* of another person. Obviously, this can remind us of the role and possibilities of hypnotic interactions, as will be discussed in greater detail later.

Later, this unilateral dependence turns into *mutual regulation*, the immediate physical contact loosens, and the mother-child relationship builds on eye-contact, gaze, and communication via facial expressions instead of on touch. The child's interest is more and more extended to the objective world, to the physical environment; in parallel with this, manipulation and locomotion gain more and more ground.

Despite the definite advantages of the concomitants and consequences of interactional synchrony, there is an increasing number of signs indicating that a kind of optimum-principle is present here, too: The simple relationship that the highest synchrony is the most advantageous is not necessarily true. For example, Hane, Feldstein, and Dernetz (2203) found that there is an inverted U-shaped relation between dyadic vocal coordination and maternal sensitivity. The highest sensitivity was measured in mother-infant dyads with *moderate* levels of coordination. Thus, it is natural, in fact, it is necessary that "the experience of synchrony must leave room for unpredictability, mismatched states and random events, and contain both order and variability, stability and change" (Feldman, 2007a, p. 340).

It does not come as a surprise by now that the **lack of synchrony** can be natural, and even beneficial. This applies already to the level of attachment. Although Bowlby and Ainsworth found secure attachment as the “natural prototype”, and indeed, this is the most frequent variety found in research (Cassidy and Shaver, 1999), analyses by evolutionary psychology have shown none of the attachment styles to be superior to any other: Their “goodness” is determined by their adaptive value under the given circumstances (Berezkei, 2003). Several factors determine what is optimal at the moment: the gender of the child, the economic situation of the family, the kind of help available in caring for the child, etc. (Simpson, 1999). If the resources are scarce, and there is no positive prospect for the future, avoidant attachment may be more adaptive than secure attachment. Attachment style is determined by the facultative reproductive strategy. As a direct consequence, one must be very careful in the “high-handed” modification of attachment styles and working models into a putatively more favorable direction. The *long term* considerations of reproductive fitness are more important in evaluating an attachment style than the *immediate* advantages that are more favorable from the aspects of health or some other perspective.

The lack of synchrony provides important information in the interaction. As an example, the mother may signal to a 2 year old child by *misattunement* that she disapproves what the child is doing. The **periods of asynchrony** may be important for the development of the child also because they may help the child learn to postpone the satisfaction of his desires, or to make an insufficiently responsive partner respond (Cappella, 1994).

The analysis of the interaction patterns of healthy mother-infant dyads revealed that the dyads spend most of their free play-time in a *mismatched* state, which, however, is repaired in the next step (Feldman, 2007b). Thus, in the process of coordination in intimate relationships it is inherent that there are periods of mismatch. Research on interactional synchrony has been extended to how the partners repeatedly repair patterns of mismatch. This made it possible to describe the extent of **correctional capacity** a given dyad has. Experiencing mismatch and participating in its subsequent repair also provides an experience to the partners that it is a natural part of human relationships that our social needs are not always satisfied immediately, and that losing coordination is temporary and recoverable.

Upon the correction of seriously injured attachment experiences suffered in the course of development, it is important that the therapist sets limits, in addition to offering consistency and stability enabling the patient to have corrective experiences. Understandably, setting limits may elicit negative feelings, anger, feeling hurt, or anxiety in the patient, to which the therapist continues to respond with accepting calmness; with this, the therapist makes up for the natural experience of a child, as it learns to accept separation and the loss of symbiotic omnipotence (Murray-Jobson, 1993).

Werner and Baxter (1994), analyzing the *temporal patterns* of relationships, brought a rough-and-ready, but undoubtedly realistic example of the **advantages of the lack of synchrony**: When the work schedules of a couple are not in synchrony, it may be advantageous because this way they can alternate in taking care of the child.

Altman (cited by Warner and Baxter, 1994) argues that it is natural in relationships that coordinated and “uncoordinated” (open/closed, intimate/superficial) **periods alternate**. Individuals and even couples vary in their need for closeness and coordination, both in time and in extent. According to Altman’s analysis, no pattern is better than the other, they only point out that extreme cases of stability and change are characterized by less viable relationships.

Cappella (1994) also argues that no interactional pattern alone – reciprocity or compensation – is good or bad; neither is superior to the other. One always has to examine what one or the other pattern *means* in the given context, and how much it fits the long-term or actual needs of the involved parties.

Hane, Feldstein, and Dernetz (2003) explicate in the *goodness of fit* model that no general rule can be given about the optimal level of sensitivity or synchrony. It may depend on the momentary needs of the child, on the situation, and on many other factors. For example, deMendoca, Cossette, et al. (2011) studied 32 months old children and their parents and found that in dual situations high levels of synchrony appeared between fathers and children (similarly to mother-child dyads), but when the child was together with both parents, the fathers withdrew, as if “handing over the field” to the mother for higher levels of synchrony. This is an important empirical finding, showing that someone – the father, in this case – “could” produce a high level of synchrony with the child, but they do not do so in the given situation.

As a summary, interactional synchrony plays a positive regulatory role in the lives of people living together: It promotes the coordination of communication, understanding each other, and carrying out tasks to be performed together efficiently. It mediates intimacy, attraction, and affinity between the partners. Starting from the biological, and then going through the behavioral and social levels, it supports the synchronized use of symbols. Synchrony plays a key role in the development of parent-child relationships, just as much as in the attachment between adults. Synchronous processes facilitate the development of self-regulation.

On the other hand, the **lack of synchrony** also plays an important role: For example, it may mediate the disapproval of the parties regarding the interaction, or may help in accommodating to the delays and frustrations unavoidably present in interpersonal situations.

In adults, moderate levels of synchrony appearing from time to time can be considered as the most advantageous, but it is more exact to say that as far as we know today, there is no general rule as to the optimal timing or level of synchrony. It is always the needs of the interactional partners and the actual contexts that determine what degree and pattern of synchrony is favorable.

Nova Science Publishers, Inc.

PART II: THE HYPNOTIC INTERACTION

INTRODUCTION

We will start the discussion of hypnotic interaction with the question whether the situation of hypnosis can be considered as a *model situation* of dyadic interactions. In the course of this, we will arrive at research and researchers who see the essence of hypnosis as interpersonal in nature.

Then, in relation to the general characterization of social support, we will also examine if the situation of hypnosis can be considered as a basic form of social support, too.

The relationship between hypnotist and the hypnotized person in the clinical field will be reviewed within the relational dimension of hypnosis, along the concepts of animal magnetism, transference-countertransference, and resonance.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

HYPNOSIS AS A MODEL OF DYADIC INTERACTIONS, AND HYPNOTIC INTERACTION AS AN INDEPENDENT TOPIC

Hypnosis has been playing an increasing part in neuroscience research. In a hypnotic situation, we can produce phenomena – under controlled conditions – whose brain mechanisms lying in the background are of great interests to researchers: from amnesia to mental images, from various emotions to immune responses, from attentional processes to the world of pain. Often, these studies are not about hypnosis itself, but they use hypnosis as an *instrument* in producing other phenomena. Nevertheless, this can be regarded as a sort of Copernican revolution in the scientific acceptance of hypnosis (De Benedittis, 2012).

If hypnosis is looked at as an *interaction*, there are two points to be considered:

- a) On the one hand, hypnosis can be looked at as a **model situation of dyadic interactions**. The basic setting of hypnosis, the so called heterohypnosis – there is one hypnotist interacting with one subject – presents a remarkable possibility for modeling adult dyadic interactions. It could be an excellent field for testing methods developed for interpersonal interactions or for adapting interactional procedures that were originally not or not intended to be specific to hypnosis. Since there have been standardized scales available for the laboratory study of hypnosis since the 1950s, this situation (also) lends itself to be used as a standard dyadic interaction. The very fact of being standard remains an advantageous condition even if there is an intense debate in the hypnosis literature about many aspects of the procedures measuring hypnotic susceptibility (see, e.g., Balthazard, 1990; Balthazard and Woody, 1992; Kirsch, 1997; Weitzenhoffer, 1980). These critical remarks do not influence the fact that the essential framework of the situation is uniform all over the world, thus, we can have quite a clear picture of what happens when a Finnish or and American colleague administers, e.g., the SHSS:A (Weitzenhoffer and Hilgard, 1959). Furthermore, hypnosis as a model situation is advantageous, because the typical variables of dyadic interactions can be modified easily: e.g., the age and gender of the participants (see Aries, 1996), the dominance-relations or roles of the parties (see

mutual hypnosis: Tart, 1967; the client as a hypnotist: Diamond, 1980; the “counter-trance” concept: Vas, 1993), etc. Thus, the effects of many typical interactional variables on any outcome variable can be observed in the original standard situation. Since hypnosis has a clear course, the progression and temporal pattern of the situation can be followed easily.

- b) On the other hand, the hypnotic interaction is **interesting in its own right**, not only as a model situation (Diamond, 1984b, 1987; Fourie, 1983; Levitt and Baker, 1983; Nash and Spinler, 19889; Sheehan, 1980). Despite the widespread and really effective application possibilities of hypnosis (Frankel, 1987; Fromm, 1987; Kihlstrom, 2008), there are serious conceptual differences regarding the essence, mechanism of action, and even definition of hypnosis up to this very date (see, e.g., Nadon, 1997; Kihlstrom, 1997, 2003). The psychophysiological parameters cannot be considered as perfectly revealed, either: We are only at the beginning of mapping the promising directions (De Pascalis, 1999; Rainville and Price, 2003; Ray, 1997; Vaitl, Bierbaumer, et al., 2005, Kihlstrom, 2012).

The conceptualization of hypnosis in which the present volume also belongs to points out that there are several factors behind these problems. On the one hand, one can see the concentration on the *behavior* in hypnosis and the neglect of the experiential side (this topic will be discussed later). On the other hand, traditional hypnosis research missed the point that the *essence* of hypnosis is that (at least) two persons, the hypnotist and the hypnotized person (subject) participate in it, that it is about the *interaction* between the two of them. Thus, instead of concentrating on only the subject – which has been a practice so far –, the circle of investigation has to be extended to both persons. This neglect of modern hypnosis research persists despite the fact that several experts have stood up for the *interactional* nature of hypnosis. For example, Baker (2000) is very clear about this: “I contend that the essence of hypnosis, especially in the clinical context – that which most clearly and critically defines it – is an interaction effect” (p. 64). Or later: “This /the hypnotic/ interaction is a reciprocal, mutually constructed one between therapist and patient that occurs in the extraordinary interpersonal arrangement that bounds the hypnotic experience, which creates the shared space for its evolution and gives it shape, meaning, and utility. This essential relational dimension is more than transference projection or displacement and more than the enactment of social expectancies and cognitive attributions. It conceives of hypnosis as a delimited process rather than an outcome, an intersubjective rather than an intrapsychic event, and as constructed rather than caused” (p. 62).

Interestingly, the study of one of the participants of this interaction, that of the hypnotist is practically missing from hypnosis research, although at the level of definition, many researchers (e.g., Kihlstrom, 1992, 1997; Nadon, 1997; see Box 3 on the definition of hypnosis in Chapter 1.) consider hypnosis a *social interaction* in which one of the persons (the subject) experiences subjectively convincing responses to the suggestions of another person (the hypnotist) by the imaginary modification of perception or memory.

Unfortunately, the hypnotist as a participant of the hypnotic situation, who is worthy of being studied, can count on the interest of the researchers only exceptionally. This is so, despite the fact that as soon as we begin to collect data on the hypnotists, some very interesting results emerge. We will see many examples of this.

6.1. THE “HYPNOTIST” AND THE “HYPNOTIC INTERACTION” IN RESEARCH

Interactional approach rarely appears in real hypnosis research, and even then, only in very special contexts.

For example, Matthews and Isenberg (1995) compared – among other data – the feelings and resistance indices of deaf and hearing subjects regarding the hypnotist. Evidently, the hypnotist used *sign language* with both deaf and hearing subjects who could sign. It was a definitely interesting finding that when the deaf subjects knew that the signing hypnotist could hear, they showed greater resistance than the members of the hearing group. It must be noted that this research concentrated only on the subjects, but at least it collected data (at least) from them on the feelings and attitudes regarding the interactional partner, the hypnotist.

Naturally, we agree with (one of the) conclusions of the authors that the rapport between hypnotist and subject is probably an essential element of the experience of hypnosis, although we do not find it justify to add the restriction that it would be especially true in a special population like the deaf. Evidently, it is true in every other case, too.

Kinnunen et al. (2001) tested the proposition of socio-cognitive theory that the suggestions are performed because the subjects do not want to disappoint the hypnotist, and that there is no real experience behind the performance. The truthfulness of their reports was assessed by means of the electrodermal skin conductance response method for detecting deception in hypnosis, developed by Kinnunen, Zamansky, and Block (1994).

According to the results, if the persons were made to believe that the absence of response to the suggestion was in fact indicating the lack of cooperation with the experimenter-hypnotist, the subjects were more likely to perform the suggestion without corresponding subjective experience. Therefore, in case of strong pressure or motivation, the subjects tend to act in favor of the hypnotist. Research data show that if we look at natural situations without such pressure, behavior correctly reflects the experiences.

In the framework of his topographic theory, Nash (2008a, 2008b) lists the material in Bitter's unpublished doctoral dissertation in 1975 among the empirical studies of the relationship between hypnotists and subjects. Bitter measured the subjects' evaluation of the hypnotist and the parent resembling the hypnotist the most by semantic differential. This clever method made it possible to measure the degree of similarity between the semantic views of the hypnotists and the parents. According to the results, the “perceived similarity between hypnotist and either parent did not facilitate hypnotic response” (p. 213).

Citing the works of Frauman et al., Nash (2008a) describes how the researchers attempted to activate the archaic forces of the hypnotic relationship by subliminal stimulation. The sentence “Mommy and I are one” was projected to the experimental group, while the control group received the neutral sentence “People are walking”. This procedure really increased the degree of rapport in the experimental group, and, in fact, the members of this group were marginally more responsive to hypnosis than the control group.

In the simulator-control study of Sheehan and his colleagues (Sheehan, 1971, 1980), it turned out that the manifest dream content of the members of the real hypnotic group included the motif that the hypnotist was a positive figure more often than did those of the

simulators, and the real hypnotic group also indicated spontaneously more often than the simulators that they felt protected, cared for, and supported.

Sheehan (1971, 1980) and his colleagues – following the design of Orne (1959) – studied the relationship between subject and hypnotist in their experimental program in a special arrangement, under various conditions. They established a special expectation in healthy volunteering subjects – in a previous university lecture – about the nature of hypnosis, namely, that the hypnotized subject performs a certain suggestion in a compulsive manner (e.g., catalepsy of the dominant hand) whenever he hears a key word (e.g., “experiment”) linked to that suggestion. For emphasis, the researchers demonstrated this in a live hypnosis-demonstration of a “trained” model-subject.

The subjects prepared this way were tested in the main study. The main question was, that if the hypnotist mentions the key word evidently only “incidentally”, would the subjects perform the linked behavior (in accordance with the previously established expectation), or sensing the intention of the hypnotist, the given response will not be manifested.

The critical situation for eliciting the response was when the key word appeared in the text of dehypnosis:

Remember that I told you a little while ago that your right hand would scratch your ear whenever you heard the word “experiment” (1st test). Your hand will no longer respond, you will no longer be alert to the word “experiment” (2nd test). Your hand will no longer will scratch your right ear when you hear the word “experiment” (3rd test) (Sheehan, 1971, p. 305).

Obviously, the key word does not appear in its “real” meaning here, the subject hears the very removal of the original suggestion. However, he learnt in the previous lecture on hypnosis that the response linked to the key word always appears in a compulsory manner, as was shown in the live demonstration on a subject emphatically, even after hypnosis was over.

The question is which is stronger, the actual intent of the hypnotist or the preconception of the subject. Hence the name of the procedure: *countering*, indicating that real, highly susceptible hypnotic subjects react to the key word in accordance with the real intent of the hypnotist, and are able to counter their preconceptions, while the simulators (see Box 8 on simulator design) will act in accordance with their previous expectations.

Sheehan and his group considered the presence of “countering” if the response appeared at least twice in the above three testing occasions.

The basic experiment really proved that highly hypnotizable subjects tend to respond in accordance with the intention of the hypnotist, while the simulators act upon their previous expectations. In the author’s interpretation, the reason of this behavior is that the real experimental subjects resolve their inner conflict by acting in accordance with their desire to please the hypnotist.

It has been shown in many variations of this experimental paradigm that countering is really a good – and behavioral! – index of rapport with the hypnotist.

If the hypnotist conducting the previous demonstration was the same as the one in the main experiment, the conflict was even more intensive. Nevertheless, the real subject responded in accordance with the intention of the actual hypnotist. Furthermore: even when the preconception was established in the very same hypnosis session in which countering was

tested, the effect did take place; that is, following the actual intent of the hypnotist was more decisive in the case of the real subject, even when it required countering the suggestions of the *very same* hypnotist in the *very same* hypnosis session.

BOX 08. SIMULATOR DESIGN

The “simulator design” was introduced into hypnosis research as a “quasi-control” by Orne (1959, 1962, 1969, 1970, 1971, 1972; Evans, 1971). The aim of the arrangement was not to introduce a real control group, but to find out if the results found in hypnosis (or some other experiment) can be attributed to the studied phenomenon (e.g., to hypnosis) or to some unavoidably present demand characteristics of the situation. In this technique, some individuals who proved to be non-susceptible to hypnosis in a previous testing are asked by an experimenter (other than the hypnotist) immediately before the next hypnosis session to pretend that they are in deep hypnosis, that is, to mislead the hypnotist intentionally. Persons assigned to such a role are called simulators; those who receive not such instructions are the “real” subjects. Since simulators have no opportunity to prepare for this role, their performance in hypnosis can be attributed to the *demand characteristics* of the situation.

Experimental evidence shows that everyday people can successfully act being under hypnosis; even experienced hypnotists are unable to differentiate them from real, highly susceptible persons who are under hypnosis. It must be emphasized that it is a direct expectation of the simulators – i.e., subjects low in hypnotic susceptibility – not to be in hypnosis, only to fake it. Thus, on the basis of the data recorded in a real-simulator design, we can say nothing about what the results would have been if the very same subjects had been in the “real” condition.

Simulators in were able to deceive the hypnotist in reacting to the test suggestions, experienced hypnotists could not detect faking on the basis of the behavior of the simulators.

Simulators were subjected to increasingly harder tests, and as it turned out they are capable of alleviation of pain, optokinetic nystagmus related to visual hallucination, whole body catalepsy, and the like – inseparably from high susceptible real subjects. Gfeller, Lynn, and Pribble (1987) found that after their hypnotizability-increasing training, half of the originally low susceptible persons improved so much that they could not be distinguished from the originally highly susceptible (“natural”) subjects – including performance on difficult test suggestions that are traditionally attributed to excellent hypnotic subjects by the literature, and that are the touchstones of the behavioral differentiation between reals and simulators.

Thus, test suggestions built on behavioral responses do not provide a reliable key to distinguishing reals and simulators. We have demonstrated in several studies that “trance logic”, that is (or rather used to be) the criterion for separating reals and simulators, appears in contexts independent of hypnosis, and it belongs to the general thinking style of people (similarly to intelligence or everyday problem solving; for more details, see Měřo and Varga, 1993, 2000).

The experimental application of the simulator paradigm is strictly behavioral in nature, thus, its classical use does not give us a glimpse into the experiential world of the simulator (Cox and Bryant, 2008).

It is a peculiarity in the area of experience studies that Sheehan and McConkey (1982) developed the so called hallucinatory version of their Experiential Analysis Technique (EAT) (that taps experiences by the help of a video-playback), which means that the subjects “watch” the previous hypnosis session not in real, but in imagined playback; every other circumstance is the same as in the original: The subject “stop” the “recording” and freely report their experiences to the inquirer. In this situation, the simulators and the reals reported their experiences with the same frequency of stopping the “recording” and with the same number of words in the reports.

We went further and asked for a subjective report in the real-simulator paradigm, that is, the simulator role was extended to the period of reporting subjective experiences. In other words: We could control whether experiences could be simulated. Placing all this in an interactional environment, we had the opportunity to study what it feels like to hypnotize simulators.

It was also tested how the appearance of countering was related to the personality of the subjects. The persons “responding” and “not responding” in a countering situation showed characteristic differences in their interpersonal orientations (measured by paper and pencil tests).

In a new set of experiments, the authors manipulated the interpersonal context in positive and negative directions and tested countering under such circumstances. The results clearly showed that positive momentums – the kindness and sociability of the hypnotist – increased the occurrence of countering, while negative manipulations – for example, text given from a tape recorder, or criticizing the subject – decreased it (Sheehan, 1980).

It is worth mentioning that in all 10 but one of the experimental series the moderately hypnotizable subjects, rather than the highs exhibited the phenomenon of countering. This shows that the index serving to characterize rapport – countering – is not a simple question of behavioral compliance (otherwise, it would be present in high susceptibles more often). Reversing the argument, we can say that moderately hypnotizable people are more sensitive to the quality of the relationship with the hypnotist. Since the majority of the general population falls within this range of hypnotic susceptibility, there is another good reason why we should learn as much as possible about this momentum of this relationship.

The research on countering conducted by Sheehan and his group also proved that the trance experiences along the suggestions of the actual hypnotist in case of real hypnotized subjects have stronger effects than the socially established preconceptions. This study has a clear message in the state-non-state debate of hypnosis (see Box 1 on Concepts and main theories of hypnosis in Chapter 1). At the same time, it also shows that this trance state occurs in close attunement with the given interaction partner.

Please note that these studies, although they really take an interactional perspective, they do not actually study the hypnotist, but analyze – or perhaps manipulate – the relationship with the hypnotist from the perspective of the subject.

Sheehan ends the closing study of their research series with these words:

[...] rapport in hypnosis must ultimately be conceptualized as a two-way process involving both the hypnotized subject and the hypnotist. [...] The fact that hypnosis is a two-person situation implies, however, that the hypnotist will not be indifferent to the subjects' experience, and the hypnotist's behavior may have a definitive role to play in determining the quality of the phenomena that emerge (Sheehan, 1980, p. 279).

Barnier and McConkey (1999) revealed when and how the experimental subjects interpret the words of the hypnotist by the Experiential Analysis Technique (EAT) in a study of similar spirit. In a complex experimental paradigm, the subjects were given the suggestion that whenever the hypnotist asks them "Do you think it will rain tonight?" they will scratch their ears. The effect of the suggestion was tested at several points: before, under, and after hypnosis. They recorded in detail how the subjects responded at these points: in words and/or with scratching their ears. After hypnosis, the interpretations of the subjects were recorded in an EAT situation with the help of an independent inquirer at each testing point. According to the results, when the subjects interpreted the question as a hypnotic communication, they tended to respond behaviorally, and when they interpreted it as a social interaction, they tended to answer verbally.

This study highlights that experimental hypnosis is an interaction organized along strict rules, and in which it plays an important role how the subjects interpret the communication of the hypnotist.

Summarizing the above studies, we can say that although it is quite emphatic in the research studying the interactional nature of hypnosis that the hypnotist is also part of the process, they continued to attempt to grasp the effect of the hypnotist only in the behavior of the subject. The hypnotist himself, as an equal interactional partner to the subject – and worthy of being studied – has not appeared yet. The applied experimental manipulations often modified the "natural" interactional situation (depersonalization of the setting, negative evaluation of Ss' previous test-performance, etc., see, e.g., Lynn, Weekes, et al., 1991; Perry and Sheehan, 1978; Sheehan, 1975, 1980; Sheehan and Dolby, 1979), and the hypnotist were forced to work in accordance with the experimental setting. This is just another reason why there was no chance of obtaining data about the real, spontaneous interactions under such circumstances.

6.2 THE REAL INTERACTIONAL APPROACH

The works of Whitehead (1996; Whitehead, Noller, and Sheehan, 2008) are a refreshing exception. There is a real attempt at grasping the hypnotic interaction in their laboratory, although they have been concentrating – so far – more on the experiences of the hypnotists. For example, in one of their studies, they included two hypnotists, who hypnotized subjects of high and low hypnotic susceptibility, then they revealed their subjective experiences by the technique of EAT (Sheehan and McConkey, 1982; Sheehan, 1991, 1992) – but the reports were given by the hypnotists! The experiences of the hypnotists revealed in relation to experimental hypnoses based on standard test suggestions that hypnotists very soon

concentrate on those aspects of their subjects' behavior that they think is relevant for hypnosis, especially for estimating the hypnotic susceptibility of the subjects.

The report of one of their hypnotists demonstrates this process very well:

One thing I've learned from this process is that my expectations get formed very quickly and very early, and the rest of the session is spent in a process of confirming those expectations, not just about their hypnotizability but about their personal manner [...] By the end of the induction, I'm fairly sure about how things are going to go (Whitehead, Nollwer, and Sheehan, 2008, p. 404).

The studies by Whitehead thus call attention to the fact that hypnotists are more "present", living, and determining participants of the hypnotic situation than previously thought. They particularly emphasize the subjectivity of the hypnotists, which may in some cases distort the assumed objectivity of the hypnotists in experimental hypnoses.

The interpersonal nature of hypnosis is the best represented by the social psychobiological model of hypnosis proposed by Éva Bányai (Bányai, 1991), which conceptualized hypnosis as an altered state of consciousness that may have an adaptive value both from social and biological perspectives. The essence of Bányai's view is that if a situation is labeled as hypnosis in a special social context, it becomes possible for two persons to enter into an intensive relationship with each other for a certain brief period of time without any risks, into which they otherwise enter only in close, intimate interpersonal relationships (e.g., in a parent-child relationship). The hypnosis styles – paternal, maternal, friend-like, and lover-like – revealed in these studies model the most important intimate relationships in life (Bányai, 1991, 2008a).

The perspective represented by the hypnosis research laboratory headed by Éva Bányai in Budapest, the multidimensional approach of hypnosis have justified the existence of this model by an increasing number of empirical data in the past decades (Bányai, 1985a, 1985b; Bányai, Mészáros, and Csókay, 1982; 1985; Bányai, Gósi-Greguss, et al., 1990; Bányai, 1991, 2002a, 2002b). This change in perspective is called the **interactional approach**. In the present work, we concentrate on the experiential world of the participants of the interaction within the conceptual framework of this model.

THE HYPNOTIC RELATIONSHIP AS SOCIAL SUPPORT

Social support has proven its importance in many areas. Causal or correlational relationships have been found between social support and development of diseases, life-prospects, immune functions, coping with extreme stress situations, efficacy and trust of work-relationships, and decreasing anxiety (for a summary, see, e.g., Albrecht, Burleson and Goldsmith, 1994, or Burleson, Albrecht, and Sarason, 1994).

According to Heller and Rook's analysis (1997) the fundamental role of social relationships is manifold, and covers several areas:

- Attachment: It gives a feeling of security by experiencing the proximity and comfort of others.
- Social integration: It gives the feeling of belonging to a community of similarly thinking people.
- The possibility of providing care, i.e. that we offer attention and care to others.
- Reinforcement of our own worth: The reactions of others toward us reinforce us in our roles and belonging.
- Reliable alliance: mutual help and promise of cooperation in case of need.
- Source of guidance when facing tense situations.

According to Heller and Rook (1997), other authors list similar aspects among the roles of social relationships. They mention social integration, forming and maintenance of identity and self-esteem, coping support, emotional control and social control.

Most of these functions can be offered directly and naturally in a hypnotic, especially in a hypnotherapeutic relationship.

The experience of the bodily and mental relaxation in traditional relaxational hypnosis calls forth the experience that is naturally encountered in safe and comfortable situations. The verbal suggestions of the hypnotist lead the subject into this experience step by step. The therapeutic encounters mediate the experience of togetherness; through the regularity of the sessions, the patient may count on the experience of the repeated meetings, and he can rely on them between sessions and in the future (as opposed to the eventuality of many life situations). The profound attention of the hypnotist naturally mediates the experience of

“worth” – within clear role-relationships. In the classical situation of hypnotherapy (as opposed to many “talk-therapies”), the ritual of hypnosis highlights the direction of effect: The hypnotist hypnotizes the other person or teaches him the use self-hypnosis. This clear division of roles is only reinforced by the exceptional cases when the therapist works with mutual hypnosis or reversed role (under appropriate therapeutic indications) (see Diamond, 1980; Tart, 1967; Vas, 1993).

The hypnotherapist also has a direct assembly of tools for **affect regulation**: She may elicit (or dampen) certain emotions by direct suggestions, may search the origin of the given emotion by special techniques (see, e.g., the affect bridge technique), may split the emotional experience from the situation (by dissociative techniques), or may simply give a more favorable emotional frame to certain life events quite indirectly (see the possibilities of the uses of metaphors in Varga, 2004a, 2011c).

From among the above points, perhaps it is the provision of care that is questionable in the classical case: The patient is more likely to enjoy than to provide care for the therapist (unless we consider it care – at a very abstract level – that the patient picked her, pays for her services, or that sometimes the therapist may also experience posttraumatic growth through her work (Arnold et al. 2005)).

Other analyses differentiate the roles of social relationships depending on the situation: Are the studies made in stressful or in normal, stress-free “everyday” situations. In the former case, our partners may show direction or provide affect regulation; in stress-free times they may increase self-esteem through the provision of intimacy, togetherness, and the feelings of belonging together, may reinforce us in our roles by feed-back, and may support our personal strivings (Heller and Rook, 1997).

BOX 09. TYPES OF SOCIAL SUPPORT

Social support can take many forms in everyday life. Its main forms and types are summarized in the following table, based on Cutora and Suhr (1994):

Table box 9.1. Types of social support

| Type | What does it offer? | Examples |
|----------------|---|---|
| Informational | Advice, recommendation, teaching | Teaches the tricks of home-care. Provides the availability of helping organizations |
| Emotional | Relationship, physical expression of emotion, intimacy, sympathy, understanding, interest | Hug, touch, joint prayer, keeping a secret, interest in the well-being of the other |
| Esteem | Compliment, support, acknowledgement, relief of bad conscience | Acknowledging the strengths of the other, expressing agreement, giving voice to “it is not your fault” |
| Palpable | Providing or offering help, lending, active participation, conforming to a request | Offering money or objects, taking over a task (e.g., giving a lift, cooking, etc.), being “at disposal” |
| Social network | Presence, availability, joint experience | Staying with the person in trouble, offering such help, meeting people affected by similar problems |

The hypnotic relationship and the hypnotherapeutic process meet this double function, too: The therapeutic suggestions may be directed toward the experience of calmness, peace, and relaxation (stress-free situation), in the course of which the subject/patient is recharged.

On the other hand, the confrontative, exploratory work offers a possibility of facing tense situations within the safe frames of therapy, enjoying the safety, self-power or even specific, “tangible” (suggestive) help or ideas in solving a situation offered by the hypnotherapist.

7.1. THE APPROACHES OF SOCIAL SUPPORT

The approaches to social support unfold based on one another. Initially, it was mostly sociologically oriented analyses that were interested in the social network around the individual: From whom, if any, could the individual hope for support. The psychologically oriented approach developed only afterwards. According to this, the essence of social support is the question whether or not it exists, and how the person receiving it perceives it; it is not the nature or type of relationship that counts. The real, tangible help counts the least, as opposed to what most would think as decisive. The most recent approach concentrates on communication: How can one communicate well or in a damaging way with the individual under stress, and what characterizes the relationship that provides “good” social support (Burlison, Albrecht, and Sarason, 1994).

It is worth examining what should characterize social support in order to fulfill its real role, according to the psychological model.

BOX 10. TRAUMATIC EXPERIENCES AND SOCIAL SUPPORT

Attachment rules describe what we can count on in emotionally disturbed situations (Feeney and Noller, 1996). The fortunate ones can rely on a safe, “strong”, and “wise” background, others have a crystallized experience by adulthood that the “strong” other is unreliable or useless – if the other can be reached or is interested in them at all. Thus, the quality of attachment is really manifested in difficult situations.

In the hypnotic relationship, if one can experience that there is someone to rely on authentically after all, there is a chance that the pattern fixed in childhood can be modified and retuned. It is important from this aspect that hypnosis is able to provide both the revival of the *disturbing* event at the experiential level and the experience of *safe* support at the same time. For example, in the therapy of Post Traumatic Stress Disorder, Cardeña (2000) described hypnosis as a technique that “can assist therapist and patient in controlling and modulating the impact of these experiences” (p. 227). Thus, the hypnotic situation is suited to align the different timelines (trance logic allows for this), and the hypnotized person can experience the difficult situation (even trauma) and the safety mediated by the hypnotist *simultaneously*. This is one of the reasons why re-experiencing the traumatic event – in case of a safe background – will not re-traumatize the patient. Watkins (2000) summarized his experiences with soldiers suffering from “war neuroses” he gained by using hypnotherapy in World War II. The “abreaction” of the traumatizing event became regular.

He says: “Although these abreactions were initiated in many dozens of patients, not once was a psychotic reaction precipitated nor did there appear to be any case in which the abreaction itself re-traumatized the patient, a question I have been repeatedly asked ever since” (p. 327).

This is the key why re-experiencing the trauma will not re-traumatize the patient: “The abreactions involved an *emotional coliving* (resonant) experience with both therapist and patient, a loaning of the ego strength of the therapist to the patient. They were not merely techniques, that is, emotional reactions induced in the patient (as object) by a cognitive, unemotional, personally uninvolved, therapist – and thus more like the interventions of a mechanic repairing an engine. This factor alone may make the difference between an abreaction which is a corrective, mastery experience, and not merely ‘beating’ the patient into a retraumatization” (p. 333, emphasis added).

It is a peculiar possibility of hypnosis – as emphasized by Cardeña (2000) – that it can control the display of the stressful or traumatic situation by several techniques (screen, control-knob, presence of helping mates, etc.). It is worth mentioning that this time Cardeña (2000) thinks of the therapist as well: Since the display of the traumatic events may be burdensome for the therapist, too, the possibility of controlling and modulating them is an important protective factor for both participants of the interaction.

Perhaps it is not too bold an idea that even non-therapeutic hypnosis – especially if it is someone’s first hypnosis – may be a tense situation, because of its unfamiliarity and (suspected) uncertainty. Therefore, a non-clinical situation may model typical attachment “challenge” by providing an opportunity for facing the challenge inherent in the stress of the unknown together with the safety and pleasant experiences presented by the same situation.

Sarason et al. (1996) see the essence of social support in meaningful social contact. Most people consider intimate, emotionally interwoven relationships as “significant”. They go further when they consider the group of messages the individual receiving social support can experience as the key to social support; namely, the individual is cared for, is liked, is highly evaluated, and belongs to a community in which the members can rely on each other in case of need. This way, the individual receiving social support experiences himself differently, i.e., he feels valuable and lovable, and it may give him a feeling of general security that may he get into a situation he cannot solve alone, he may ask for and receive help from others. As compared to these feelings, actual help is only a “side-effect”, or “vehicle”, if you will. Some definitions of social support define social support straightforwardly by saying that it is the subjective experience of the individual that he is deemed valuable and highly appreciated, and that he knows himself to be in a community of people who are mutually responsible for each other (Albrecht, Burleson, and Goldsmith, 1994). Thus, this aspect comes to the fore at the level of definition, “real” help or support does not even show up. These authors also point out that the partners must coordinate their actions in order to give and take social support. Bányai’s (2011) personal experience regarding the social support she received in her illness with cancer is a nice example of this deeper, more profound interpretation: “All of these instances of feminine solidarity meant a lot more than just practical help in everyday life. They conveyed the idea I had always found ideal, that I was part of a larger community that helps its members even if they do not know each other personally” (p. 346).

Cutora and Suhr (1994) report that in really demanding life situations – e.g., death of one’s child, serious surgery – only a spouse can be a real social support (and parallel with this: if s/he does not provide this support, or is not doing it “well”, it is particularly detrimental to the person involved).

It is also known, however, that social support is often provided by strangers better than the real intimate relationships of the person. The speed of recovery after surgery may significantly be affected by the roommate both in the pre- and the postoperative phase. It is also well known that the woman in labor may be better supported by a doula than by her own husband or mother (Scott, Berkowitz, and Klaus, 1999; Simkin and Bolding, 2004; Klaus, Kennel, and Klaus, 2002). Most probably, this can be explained by the security mediated by the person who is more familiar with the given situation and is less affected by it (less worried and anxious).

(One of) the key elements of the “appropriate” support is that one should feel and interpret what the other really needs from among the many possibilities of social support (see Box 9 on Types of social support). According to the model of Cutora and Suhr (1004), the stress-level arising from the situation must be proportionate to the support offered. In this respect, the controllability of stress is decisive. If there is a possibility for control, informational and tangible help plays a greater role. If, however, the situation is uncontrollable, emotional and evaluative support has a greater scope.

There are detailed analyses regarding the **content of the message** that is best for communicating social support (Burlerson, Albrecht, and Sarason, 1994).

The analysis by Barnes and Duck (1994) point out that during everyday communication there are plenty of possibilities for sending the message to the other that we highly evaluate him/her and that s/he as a person is important for us. For example, the simple fact that our value system becomes clear in our everyday interactions also serves the purpose of mutually reinforcing that we – those who share these values – belong together and our values are the same. A simple conversation is an equally important possibility for social support, because listening to the other offers an opportunity for psychological ventilation. At other times, the partner may be helped by distracting his/her attention from the tense situation by a different topic of conversation.

Burlerson and colleagues worked out a detailed system how one should analyze the content of communication toward a person who is in a tense and stressful situation (Burlerson, 1994). Along their hierarchical model, they give an exact account of the contents that are helpful and of those that are unhelpful in calming and supporting the distressed person.

At the bottom of the hierarchically organized coding system are those messages that openly or covertly deny the feelings of the distressed person. One step higher, the message suggests at least implicitly that the helper recognized the feelings of the other, and that he is able to change perspectives and look at the situation from the perspective of the person in trouble. If the helper is able to express all this explicitly, s/he has reached the top of the hierarchy. Thus, the essence of the system is how explicitly and elaborately the content that the helper can feel what the other feels and places himself in the other’s shoes is present. If somebody sends his messages, interprets and analyzes the feelings of the other from this “position”, the analysis considers this as a *sophisticated comforting strategy*. If somebody voices his own feelings, perspectives, and gives pieces of advice, or even determines how the other should feel, has not reached this sophisticated level. Neutrality and denial of feelings are similarly unfavorable.

There seems to be an agreement between people in trouble and external analysts both in experimental, laboratory settings and in real, stressing situations that this kind of sophisticated communication counts as “good” message in difficult situations. Thus, the

subjectively favorable effects of the messages lie mostly in the *recognition of feelings* and the *change in perspective*.

It is even more interesting that in the case of “unhelpful” communication, it is not just that there is no helping effect, but the person in trouble may even become hostile or withdrawn. Furthermore, the helper may also come out of the situation unfavorably – more anxiously and dejectedly – if his communication was not sophisticated. In some cases he may even process the unfavorable effect by turning in an accusative and belittling manner toward the person in trouble – not something one could expect from a social support... No wonder, peer acceptance of people with bad communication skills are rather low.

Can we draw the general conclusion then that the essence of social support can “properly” be produced (on part of the person providing social support), and that it can be accepted, and even bought (by the person receiving social support)? It is worth considering already here whether hypnotic relationship has a special role and possibility in this respect. These questions will be discussed later.

7.2. WORKING MODELS

In the end, social support uses the system of views or schemata the given person has of himself.

Kaemer (1992) uses the expression **attachment icon** to describe the (solid) inner foundation developed on the basis of the holistic pattern of our experiences, and on which we can rely on in difficult life situations. The nature of this attachment icon determines how well we can cope with tense situations. We need attachment throughout our lives; it is an important element not only of childhood. Adults also seek for support as soon as they face a challenge that is greater than their usual everyday difficulties. If there is no “certain” (external) foundation, any support is better than no support at all (Holmes, 1996).

The classic theory of Bowlby (1980) calls this a “**working model**”: It is an internal model based on early relationship patterns (especially on the experiences with the primary caregiver) the child develops regarding himself and his social relationships at around the age of 12 months. In this model, the inner, internalized representations of the child’s relationships reflect the emotional charge and cognitive characteristics of these relationships. It is also of vital importance how the parent undertakes his or her *care giving* and *control* tasks. In infants, these are transmitted mainly through nonverbal channels: The nature of touch, gaze, and tone of voice are the main channels of the message-transmission (Albrecht, Burleson, and Goldsmith, 1994). Based on all this, empirical data have repeatedly proven that there are individual differences in the attachment security experiences, based mainly on how much the child could trust that the person taking care of him would help him in a stressful situation (Belsky, 1999).

The working model also contains how valuable the person feels himself to be, and based on this, what kind of behavior he can expect from others. Thus, early caretaking situations lay the foundations of later – adult – self-evaluation, even at such a basic level that one is or is not worthy of the love. The working model one carries about oneself and about social relationships affects many areas in adulthood: It determines the nature, number, and depth of

one's adult relationships. It also orients us as to how efficient we feel ourselves in general and with regards to a given task; it also affects how we evaluate our own coping resources in critical situations and how much help from others we can expect (and deserve) (Sarason et al, 1994, 1997; Schore, 1994). However, it must also be seen that there are different views regarding the question of *how general* the effect of attachment processes is on adult relationships. According to some views, the attachment style of the given person is important only if the adult situation threatens the person's security so much that it activates the attachment-system. Other views trace back our relationships with others to the general attachment system; the original patterns of attachment may play a role not only in extremely threatening situations, but in all areas of social life. People with different attachment styles may experience relationships differently, may behave differently, and – obviously – may organize their relationships differently (Tidwell, Reis, and Shaver, 1996).

BOX 11. THE STUDY OF ATTACHMENT

Attachment Styles

In the laboratory study of parent-infant attachment, 1-1.5 year old children are exposed to a situation which generally elicits a reaction in the child to seek its parents for support. The situation may involve the child being taken to a strange room, or a stranger may enter the room, or the mother may leave the child alone in the room.

The quality of the parent-infant relationship is usually inferred from the behavior of the child upon the return of the parent. Four categories have been formulated on the basis of this behavior, identified as attachment style (Ainsworth, Blehar, et al., 1978):

1. **Securely attached (B):** The mother serves as a secure basis for exploration, the child begins to play in her presence. During separation, the infant misses its mother visibly, but upon reunion, the infant can be comforted easily, and continues playing. According to home-observations, the mothers in these cases reacted to the signals of the child sensitively and appropriately, and their responsiveness was in synchrony with the demands of their infants. 60-65% of the middle class American and European children belong to this group.
2. **Insecure – Avoidant (A):** The child is involved in exploratory play easily, while showing little emotional reaction toward the mother; behavior indicating secure attachment is almost completely absent. The infant reacts to separation only minimally, there is little sign of distress when the child is left alone. Upon reunion, the most typical reaction is the active avoidance of the mother: The child does not look at her, does not approach her, and prefers to play with the toys. According to home observations, the mothers behaved rejectively toward the infant with this attachment style, especially when the child expressed its need for contact. The mother did not enjoy in making bodily contact with the baby, and was insensitive to the signals of the infant in general. About 20% of the middle class American and European infants belong to this category.

3. **Insecure – Ambivalent (C):** Signs of anxiety and distress can be seen already upon arrival. The child is afraid to explore the environment even in the presence of the mother, does not trust and is afraid of a stranger. The child violently objects to separation, but upon reunion, the mother cannot comfort the child: The child show the signs of both seeking and the angry rejection of contact simultaneously, has tantrums, and may even hit the mother. According to home observations, the mother of these children were unpredictable, inconsistent, her behavior was not in synchrony with the needs of the child. About 10% of the middle class American and European children belong to this group.
4. **Disorganized (D):** It is inconsistent, disorganized behavior which seems to be pointless and incomprehensible in the given situation, for example, the simultaneous appearance of contradictory behavior-elements, unfinished or frozen movements, open expression of fear of the parent, disorientation. There is no coherent attachment strategy. In the background, there is a frightening, neglecting, abusive mother, or one under psychiatric care. About 10-15% of the children belong to this category. (The source of the description of the four categories: Józsa, 2012c, pp. 300-301.)

Adult Attachment Interview

The Adult Attachment Interview (AAI, George, Kaplan, and Main, 1985) serves for the study of adults as they remember their childhood attachment. In the course of a depth interview, there are direct questions aiming at revealing the memories of childhood attachment and the relationship with the caretaker, asking about the sometimes openly painful experiences (separation, illness, loss, etc.). Evaluation is not based on content, but on the *nature* of the report. On the basis of this evaluation, people can be categorized into one of the following four groups (Fonagy, 1999; Fonagy, Steele, and Steele, 1994; Holmes, 1996):

- 1) **Secure autonomous:** The report is coherent and cooperative; attachment is important for the person, he can recall it easily and can talk about it in an objective manner.
- 2) **Insecure dismissive:** The report is incoherent, the person minimalizes the discussion of the experiences related to attachment, and while he is trying to show a positive image, he does not go into the details and makes generalized statements.
- 3) **Insecure enmeshed:** The report is chaotic and incoherent; the person is entangled in the discussion of certain experiences so much that it has a detrimental effect of the course of the conversation.
- 4) **Unresolved:** The report is characterized by striking errors, contradictions or omissions at the discussion of potentially traumatic events (loss, abuse) (other parts of the interview can also be categorized into one of the other three categories). (The source of the description of the four categories: Józsa, 2012c, pp. 308-309.)

We build on our working models when we develop the inner strategies of affective regulation, whose root is the internalized version of the mother's role of affective regulation.

It is interesting that there are individual differences in how sensitive people are to rearing influences; people with insecure attachment exhibit greater sensitivity (Belsky, 1999). Children with secure attachment are less dependent on their teachers than their mates with insecure attachment (Thompson, 1999). However, no attachment style goes together reliably with any personality trait (Cassidy and Shaver, 1999).

Still, there are characteristic differences in the working models among the different attachment styles (Feeney, 1999). Securely attached people have warm, emotion-filled memories regarding their parents, they have barely any doubt about themselves, they have high self-esteem, and indeed, others usually like them. They also regard people as kind-hearted, benevolent, and worthy of trust. They look out for relationships, strive for a balance between autonomy and connection to others. They handle their negative feelings constructively.

The situation is completely different in the cases of avoidant and ambivalent attachment styles. The memories of the former depict a cold and rejecting mother, people as suspicious, unworthy of trust, and there is a constant doubt about the intention of others. Avoidant people do not look for the closeness of others, they are detached, and they try to satisfy their need for autonomy by avoiding intimacy. In case of distress, they do not show their anger or other negative feelings, and refrain from self-disclosure.

People with ambivalent attachment style remember unjust parents, and have difficulty in understanding others. They think people govern their own lives. They are afraid of rejection, they have an extremely high need for intimacy, and in order to satisfy this need, they are exceedingly solicitous and obedient.

7.3. THE MODIFIABILITY OF WORKING MODELS

It is an exciting question if the developed working model can or cannot be modified. Initially, Bowlby's theory (1969) said that the early childhood experiences accompany us from the cradle to the grave, and that there is a possibility for the modification of the working model in childhood only some special cases, for example, when a significant event happens that does not match the existing working model, the old working model adapts to the experiences of the new reality.

In his later works, Bowlby (1980) arrived at the conclusion that although no fundamental changes can be expected in the working model, as a result of attachment relationships experienced later – even in adulthood –, the models developed on the basis of early attachment may be revised and slightly modified (Feeney and Noller, 1996).

Today, several authors argue already that working models can develop after the early childhood parent-child relationship, too.

It is especially the experiences gained in intimate social relationships (with members of the family and friends) that refine the working models and the understanding of the person about social relationships in general (Albrecht, Burluson, and Goldsmith, 1994). In fortunate cases, the person is surrounded by securely attached people, because they usually convey

warmth, acceptance, and positive evaluation. These experiences may reinforce (if it had been there at one time), or in fortunate cases may re-calibrate the originally unfavorable working model of the person in the direction where the fundamental mode of operation is security, reinforcement, and unconditional support.

It is less fortunate if someone has a partner with ambivalent attachment style, because the communication of this style is based on setting up conditions, expectations, rejection, and disconfirmation. One might think that people with ambivalent attachment style flee from such relationships, but what can be seen is that people with ambivalent attachment style tend to find partners with similar attachment and communication styles. Style *consistent* with the existing working model seems to be the important issue when choosing a mate (Albrecht, Burleson, and Goldsmith, 1994).

We may conclude from all this that hypnotherapy with a corrective goal has to be sufficiently flexible. In some cases – due to the consistency-need described above – the hypnotic relationship initially conforming to the less favorable attachment and communication styles can gradually turn into more mature versions built on secure attachment only later, and only gradually (the principle of leading and pacing hold here, too).

Certain **life situations facilitate the modification of working models** (Feeney and Noller, 1996). For example, the working models of a person may suddenly “jerk” at significant milestones of life – moving from home, wedding, birth of a child, etc. –, when the social medium of the person may radically change. The probability for a working model to change is also greater when the relationship events send fundamentally different messages than previously (e.g., the spouse leaves the marriage when the partner becomes seriously ill). It also promotes change if somebody learns new information or gains an understanding that puts his previous (early childhood) experiences in a totally different light. For example, he may find out – or understand – that the financial or social environment prevented her mother to spend enough time with, and pay more attention to her when he was a small child.

Slade (1999) points out that working through a working model, the correction of an attachment style does not take place at once; usually, long therapy is needed for that. The situation of hypnosis is again in a favorable position, because – with its intensive working method – it may be faster and more efficient than many other forms of therapy.

According to the analysis by Howes (1999), if attachment develops with several caretakers, various organizations of the internal working models are possible: In the *hierarchical* case, the relationship with the mother is decisive, it is above all other relationships, and it determines all other attachment. *Integrative* organization assumes that the child, based on his experiences with the caretakers in his life, integrates all these experiences into a single working model, creating an attachment network. *Independent* organization assumes that independent working models develop that are characteristic of certain developmental areas or that are linked to important attachment objects (persons), determining the area on which they will have an effect.

For the correction of working models, the hierarchical case is the most difficult, since it assumes that the relationship with the mother is conclusive regarding all other relationships. In the integrative case, the effect of the working model developing upon the corrective therapeutic experiences may be weaker because of its integration with the other (existing) working models. In the independent case, the working model developing in the course of the therapeutic relationship can have an effect only on those areas upon which it was built.

As to hypnosis, maternal hypnosis style seems to be a solution to going furthest and reaching the working model gained through the experience with the real mother and arriving at the top of the hierarchy.

The avoidance and the low level of intimacy are related to many things: In these people the degree of loneliness, depression, and the occurrence of bodily symptoms are greater, felt vitality is lower. People with low level of intimacy receive and give less social support (Tidwell, Reis, and Shaver, 1996).

Thus, there are several reasons why it seems to be a good idea to “move” somebody from the attachment model that avoids intimacy, and to show him a model of the security, or even pleasantness of interpersonal relationships.

7.4. THE CHARACTERISTICS OF THE HYPNOTIC RELATIONSHIP IN THE FUNCTIONS OF SOCIAL RELATIONSHIPS

Let's review the characteristics of the hypnotic relationship in the functions of social relationships along the analysis by Heller and Rook (1997):

Social integration: the experience of belonging together, being in the community of others. Its approach is simple: They look at the number and the nature of the encounters of the individual with others, then the kind of community the individual is a member of, let it be religious, sport, or any other organization. Several studies have shown that lower levels of social integration are related to higher risks of mortality (see Heller and Rook, 1997). In the absence of social integration, the hardships of life evoke greater anxiety and are more trying for the individual.

The potential of hypnosis in this area is increased self-esteem through the hypnotic relationship, and making the individual more open, and consequently, he may take greater courage in searching and maintaining relationships and memberships in organizations.

Development and maintenance of self-esteem and identity: Internalizing how others evaluate us determines what and how we evaluate ourselves. In this respect, the opinions of our parents, teachers, or significant others are decisive. Furthermore, a two-way effect can be assumed: The image we have of ourselves affects how others will evaluate us, therefore, the original self-esteem may “solidify” itself and may reinforce the previously developed version.

The hypnotic situation seems to be suitable for breaking this cycle and channeling it in the right direction for several reasons. The hypnotist may take on the relationship pattern of a *significant other* already in a “simple” experimental hypnosis session (c.f., maternal, paternal, friend-like, sibling styles), thus, the messages sent by him may be more significant than usual. Furthermore, the hypnotic situation itself, and several suggestions in it may offer an opportunity for the individual to be “measured” in a special, uncommon medium. On the other hand, the feedback of the hypnotist can be quite flexible, it may reinforce practically any outcome positively. For example, after the suggestion directed at the catalepsy of the arm and the subsequent challenge to try to bend it, any reaction can be labeled as “successful” in a therapeutic environment (regardless of the standardized scoring criteria): If the person is able to bend her arm, the hypnotist may emphasize the strength at her disposal for concentrating

on overcoming the difficulties and that she can employ in achieving changes. If, however, the person cannot bend her arm in the same situation, the hypnotist may reinforce her for keeping the control over so powerful forces, and in being able to concentrate so well in achieving a goal, etc. The posthypnotic suggestions make it possible to extend these effects and experiences to real life situations, helping the individual in overcoming the challenges of the role-expectations and other trying experiences in everyday life.

Coping resources: It is another significant characteristic of social relationships that the individual meets possibilities that enrich his coping strategies. Others may promote solving tense situations in many ways, from giving advice directly through re-interpretation of the situation to transforming the emotions elicited by the situation. In the course of this, it is advantageous if the helper has also had a similar experience, but at least if he genuinely shows his empathy to the person in the difficult situation. It is essential that the self esteem of the person receiving the help should not be damaged, the advice should not come from “high up”, and the over-protective and over-controlling way of helping should not undermine the self-evaluation and autonomy of the affected person. On the contrary, the aim is to strengthen the competence of the person and to enrich his coping repertoire.

Hypnosis offers special possibilities in this area, too. The solution of the situation can be tested “in (hypno)vitro”, the person can prepare for the possible outcomes of the given version, and for handling the accompanying feelings and reactions. It is even more exciting that in the hypnotic situation – because of the special dissociative capacities of hypnosis –, the patient can ask for and can receive help even from himself (e.g., from the healthy part of his self, from his childhood self, or from his “inner wisdom”), which excludes the possibility of the superiority of the “other” to hurt the autonomy of the person, as he himself is in that role, too. Naturally, all this (i.e., the inner wisdom, the source of resources is the person himself, etc. – can be reinforced by specific suggestions, and again there is a possibility to extend them in the future by way of posthypnotic suggestions.

Affective regulation: Critical life situations can endanger the safety of the persons, values, and objects that are important for us. Evidently, this may be accompanied by extremely negative emotions. Managing the anxiety, depression, anger, self-accusation, remorse, and similar excruciating feelings arising in such situations is really not easy. Partners can help in the appropriate reduction or termination these feelings even if only by listening to the affected person with an open attitude; they relieve the person of the depressing weight of the negative feelings by offering the possibility of psychological ventilation; a gesture (e.g., offering a drink) may already show a way out of the whirl of negative feelings and may even elicit positive ones. The sheer presence of a helper, through the experience of belonging together and friendship may tip over the balance from negative to positive dominance (or at least equalize it), while pleasant times spent together can fill up our psychological resources.

The hypnotic relationship can build on many possibilities in helping work through negative feelings: the feelings can be objectified in the subjective reality drawn by the suggestions, they can be crushed, or their colors can be changed from the original gloomy to more favorable or desired ones. The storage place of the balancing positive feelings can even be filled up in advance; often, the hypnotherapist has the patient experience a favorite place or pastime, then in moments of difficulties these experiences can be recalled.

Social control: Taking control over the individual may seem at first appear to be an odd one out among the roles of social relationships. Why would it be beneficial, or even supportive, if somebody took control over us? On second thought, however, it means that an appropriate social network holds the individual back from slipping into dangerous or deviant behavior. This is achieved partly by the responsibilities and obligations of close relationships (similarly to marriages and child-rearing), and partly by their direct persuasive power and punishing and rewarding roles, depending on the support or rejection of certain forms of behavior.

Hypnosis in this respect has evident possibilities. The hypnotist has several tools at his hand in order to take control for achieving a previously agreed goal, from direct suggestions to subtle indirect methods.

Based on the analysis by Heller and Rook (1997), let us review how social relationships get modified if they do not form naturally, through informal relationships, but in an organized (assigned, or even paid) way. Common sense and some research suggest that the *informal, voluntary* attention to each other is the real relational source; its “formal” version is necessarily secondary. Looking closer at the question, we will arrive at an interesting conclusion.

In many critical situations, one cannot readily count on one's natural relationships, because the relatives, friends, and colleagues are often also directly or indirectly affected by the eliciting negative effect (e.g., natural disaster, unemployment, serious illness). This *contagion of stress* usually makes it impossible for these partners to offer substantive support in case of trouble. Having “routine” and experience, and having no experience or routine also count a lot. A professional helper, who has already witnessed similar challenges several times (and at best also saw how to resolve them), starts from a better position than a natural relative or friend who may have never met similar critical situations from close. In many cases, the family members and friends may have a distorted idea about the “correct” way of reacting to a severe loss or to facing a serious illness. Oftentimes, this is why it is impossible to freely discuss the fears and doubts that preoccupy the persons involved. If the problem is prolonged (as in chronic diseases), the natural helper may get tired of attending to the situation that is not improving fast enough by his personal expectations. This impatience may have a serious detrimental effect on the person in need.

Because of its conspicuous positive effects and widespread significance, we often tend to forget that social support *may have negative consequences, too* (Albrecht, Burlson, and Goldsmith, 1994). Social support may increase the dependency of the person receiving it, may evoke a negative self-image, and may also increase a feeling of insecurity.

The study with married couples conducted by Cutora and Suhr (1994) demonstrated that many negative effects may emerge when the couples ‘support’ each other in stressful life situations; for example, if the helper begins to talk about his own problems, cuts into the talk of the other, blames the other, or simply withdraws and does not care about the problem of the other.

The personal relationship developing in the course of social support may become a source of criticism, conflict, and stress. Indeed, there is a narrow margin between compassionate sympathy and excessive worry. “Being helped” may injure the autonomy and privacy of the person being helped. Under certain circumstances, it may be below one's dignity to ask for support and help.

The may be adverse effects on the person giving social support, too, e.g., running out of personal resources, making disproportionately great sacrifices of time and effort, especially if support has to be given for a prolonged period. In some tense situations acting as a helper may require greater commitment and responsibility than it should. It is also possible that the efforts will be evaluated negatively. Meeting someone in need of help may leave a deep impression on the helper: It may be emotionally very disturbing to meet human suffering and defenselessness (Albrecht, Burlson, and Goldsmith, 1994).

7.5. FURTHER POSSIBILITIES OF THE HYPNOTIC RELATIONSHIP

Studies of social support show that people tend to involve *family* relations into effective instrumental help, while *peer relations and friends* provide **enjoyable, positive experiences and happiness** to most people (Sarason et al., 1994, 1997). In the latter case, the key mechanism is the joyful relaxation, the positive emotions experienced together, which has a favorable effect on the immune functions.

Even this function can be carried out under controlled conditions by active-alert hypnosis (Bányai and Hilgard, 1976). Bányai, Zseni, and Túry (1993) end their chapter on the application of active-alert hypnosis in psychotherapy with the discussion of the possibility of achieving positive emotional states by this very method – at this time, thinking of the hypnotized persons only. As we shall see in Chapter 11, we found similar results in the hypnotists as well.

The hypnotic state stands out from other altered states of consciousness, because here, the altered state of consciousness is based on *interpersonal processes*: The hypnotized person, following the (generally) verbal suggestions of the hypnotist, gradually enters a state where he can experience fundamental perceptual distortions, his thinking, emotional, and memory processes change, while his reality testing and control processes diminish temporarily. At the same time, the situation does not leave the hypnotist unaffected, either. The altered state of consciousness associated with hypnosis can be a genuine experience both for the hypnotist/therapist and the subject. “The adaptive functions of altered states of consciousness can be classified in three categories (Ludwig, 1966): (1) promoting healing and feelings of well-being; (2) avenues to new knowledge or experience; and (3) social functions.” (Farthing, 1992, p. 203). It is well known that **altered states of consciousness experienced together** may serve as a basis for “togetherness”; it lays the foundation of and strengthens social cohesion.

The context of hypnosis has special advantages for most clients: It improves rapport, enhances transfer-relations, and if the client’s attitude toward hypnosis is positive, his trust toward the hypnotist and the efficacy of therapy will increase. Hypnotic suggestions in many patients really alter perception and make imagination more vivid (Rhue, Lynn, and Kirsch, 1993).

The therapeutic relationship with its seemingly secondary characteristics – arriving on time, regularity, repeated meetings, reliability – send the message of stability and security, that had not existed or still does not exist in the patient’s life, to the patient (Holmes, 1996).

In the special situation of hypnotherapy, a kind of “**rite in the rite**” is manifested: There is a regular series of sessions one after the other, in which hypnosis occurs separately, as if

adding another layer of rites. This order becomes clear to the patient, especially after seeing (or learning through self-hypnosis) the internal structure of the hypnotic situation.

Coe (1993) is very vivid in writing about the nature of the hypnotic rite: He says it sends the message to the patient that “something profound and important may occur” (p. 76). This can be especially important in situations where the days are usually filled with negative, painful, and unpleasant experiences, like in the treatment of patients in intensive care units (Varga and Diószeghy, 2003a, 2003b; Varga, 2004b, 2011a). Eisen (1993) also points out that in the special situation of hypnosis, the patient can allow himself letting overwhelming emotional material come to the surface that could not be done in “more cognitively or intellectually oriented therapy settings” (p. 144).

Kirsch (1993) – although he is one of the opponents of the state-view of hypnosis – admits that the context of hypnosis offers special opportunities to both patient and therapist that could not be done in other situations, or only with unpleasant feelings. For example, it fits the hypnotic context naturally to repeat certain suggestions – let them be the patient’s self-suggestions or the hetero-suggestions told by the hypnotist – that would look silly in other situations; in the hypnotic context, the client may produce behaviors that he himself would not have thought he would be capable of doing. It is also a special opportunity for the therapist to talk in a tone of voice, tempo, and emphasis that he would not do otherwise (Kirsch, 1993). Our own empirical data support this fact observed by many (see Box 28 on The voice of the hypnotist in Chapter 19.)

Following Strauss’ (1993) analysis, it is worth noting that the clear rite of hypnosis also makes failure more evident; thus, for therapists who are afraid of failure, it is less advantageous to work with hypnosis than with some other method.

Nova Science Publishers, Inc.

THE APPROACH OF THE RELATIONAL DIMENSION IN THE CLINICAL SITUATION¹

Humanity has been trying to understand the factors playing a role in the curing of diseases for thousands of years. The idea that among the possible mechanisms of healing the relationship between the patient and the healing person deserves attention can be tracked nicely in the history of hypnosis (Gauld, 1992; Gravitz, 2004; Spiegel, 2002).

One of the best known – and often misinterpreted – examples of this process is the work of Franz Anton Mesmer (1734-1815). Mesmer took the idea of his predecessors, saying that the primary goal of healing is to reinstate the upset balance of the fluid in the patient's body – health meant a free flow of this fluid. In practice, he initially tried to achieve this with the help of magnetic metals, and then he realized he did not need these objects, as he himself, as a healthy body has sufficient magnetic force. Hence the name of the procedure: *animal* (i.e., living, not metal) *magnetism*.

This is how the relationship and the physical proximity between two persons came to the fore as essential elements of healing. Mesmer himself already recognized the **transference** from the healthy individual to the sick person, which he called **magnetic reciprocity**. Although he thought that an invisible physical fluid flows in the course of healing, he also emphasized the relationship and attraction between two persons, what he called **rapport**. This mechanism assumed a two-way flow between healer and patient; furthermore, Mesmer also pointed out that the transference takes place by way of *feelings*. At the same time, he was reluctant to maintain any verbal contact with his patients; he saw the essence of his method in restoring the free flow of the obstructed fluid by way of physical contact. He applied this method on children, unconscious persons, and even plants (Gravitz, 1991, 2004). As is well known, after the commissioners examining the method of **animal magnetism** condemned the method – and even found it dangerous to public morality and even health – in 1784, Mesmer gradually withdrew from public. The decline of his method could partly be attributed to the fact that he used a metaphor for interpersonal processes – “magnetism” – that was not really understood by the science of the era even for inanimate objects, and was utterly at loss with assumed, yet invisible forces among people (Spiegel, 2002).

¹ The present chapter is the substantially extended and revised version of my previous papers in this area (Varga, 2000, 2004a). Regarding this topic, see also Bánayai É., Varga K., Gösiné Greguss A. (2001).

After Mesmer, it was Marquis de Puységur (1751-1825) who made the next important step forward in understanding the interpersonal elements of healing, although he never rejected Mesmer's physical magnetism tenet. It was his practice where verbal contact between the healer and the patient became general, he emphasized the importance of the motivation and determination of both parties for the success of the treatment, and even described how inspiring the beliefs, emotions, and trust of both the patient and the healer are for each other.

Later mesmerists (hypnotists) dealt with the relationship between patient and healer one after the other: They debated its necessity and its one-way or two-way nature, and paid special attention to the erotic charge, that kept emerging, as became evident already in the report of the commissioners examining Mesmer's method (Franklin, 1837).

Sigmund Freud (1856-1939) learnt about the method in Charcot's institute in 1885. In those days, he considered hypnosis as common sleep, but in a few years he reached a point where he compared hypnosis to the love relationship between parent and child. In defining suggestion, Freud calls the concept of transference for help, saying that suggestion was the influence of a person by means of transference (Freud, 1963).

8.1. TRANSFERENCE AND COUNTERTRANSFERENCE

One of the most direct insights into the relationship between patient and healer was the discussion of **transference**, which concept is considered to be one of Freud's most significant discoveries. The essence of the process, initially discovered mainly in psychoanalytic therapies, is that the patient brings forth and then projects onto the therapist emotions and fantasies whose roots can be found in the history of the patient. These feelings were originally attached to some significant person – usually to a parent of the patient –, and in the course of therapy they necessarily get activated and become conscious, but this time the target is the therapist. Apparently insignificant details in the therapeutic setting – the therapist's way of speaking, his gestures, a word or remark, or even the color of his hair – may bring the patient's hitherto repressed anger, hatred, defiant feelings, or adoration and enthusiasm to the surface. In Freud's explanation, this transference from the original target to the person available in the therapy, that is, to the doctor occurs because the patient wants to avoid facing the original form of his emotions and passion.

At the first occurrences of transference, Freud considered it as the main obstacle of therapy, but upon its systematic appearance he gradually came to understand its significance and importance, realizing that it occurs when the repressed material was just before being detected: For the patient, it can be seen as resistance against the material becoming conscious or verbalized, for the therapist, it is a sign that it is about time to grasp childhood conflicts. Thus, in psychoanalysis, the therapist catalyzes transference, recognizes and – in an ideal case – appropriately treats the passions *temporarily* directed toward him, gradually leading them back to their real origin, uncovering the unconscious complexes, and promoting the patient face repressed affects.

Freud, and later Ferenczi **extend the concept of transference**, a) by pointing out that it is a general working method of neurotic people to waste their passions and emotions excessively in all kinds of situations, and b) by realizing that transference is not limited to the

psychoanalytic situation at all, but is present in all psychotherapies, and, in fact, it is the best explanation of the efficacy of electrotherapy, mechanotherapy, hydrotherapy, and massage in the cases of psychoneurotics. Regarding its importance, Ferenczi called it as the most powerful, probably the only essential element (Ferenczi, 1982). Freud in his later works thought that the superficial form of the therapeutic approach is only secondary, the key elements is that the neurotic person heals himself essentially by way of transference. Thus, analytical therapy only recognizes and utilizes the process manifested in so many areas of life, namely, “transference arises spontaneously in *all human relationships* just as it does between the patient and the physician” (Freud, 1962, p. 8., emphasis added.)

Let us see some details from the many interesting cases of the paper, which illustrate the interpersonal dynamics of the situation.

At the beginning, Freud barely paid attention to the reverse of transference, namely, to **countertransference**, the emotions arising in the therapist in the therapeutic situation. Understandably, he objects to its occurrence, because it would mean that the doctor’s own complexes and resistance would shape the therapy (this is why analysts are required to go through psychoanalysis before they would start working with this method).

Since Freud did not treat the subject of countertransference in greater detail than that, it remained wide open what he meant by this concept. In the broadest sense, anything can belong here that arises from the personality of the therapist. In the narrowest sense, countertransference only means the emotions elicited in the therapist by the patient’s transference onto him. In the post-Freudian literature, however, the therapeutic relationship is increasingly treated as a mutual relationship, where the healer is just as much “justified” to be present with emotions as the patient. Based on mutuality, the above definition can be reversed: The patient may also react to the transference originating from the therapist. There are some who consider this also as countertransference.

Perhaps this is the reason why there are many trends in clinical work regarding what to do with countertransference. Some say – in accordance with Freud’s warning – that it must be limited completely in therapy; some others say it has to be utilized in the course of therapy, paying special attention to the therapist’s own transference-phenomena, promoting thus the achievement of the original goal, that is, interpretation of the patient’s unconscious processes. One thing is certain: It is essential that the therapist recognize the patient’s transference and interpret it appropriately. Ferenczi calls attention to two typical mistakes: In case of hostile emotions, the patient may easily leave the therapy, withdrawing himself from the effect of the unlikable doctor; in the other extreme, when tender, love-like emotions arise, the doctors may attribute this to his own person, “to his irresistible, captivating power” (Ferenczi, 1982, p. 71).

8.2. EMOTIONAL RELATIONSHIP BETWEEN HYPNOTIST AND SUBJECT (PATIENT)

The role of emotional attunement is especially significant in forms of therapy that work with suggestions. Regarding hypnosis, this classic observation is reinforced by more recent hypnoanalytic authors like Gill and Brenman, Erica Fromm, and others (for greater details see Varga, 2000 and Bányai, Varga, and Gósiné Greguss, 2001).

BOX 12. ADJUNCTIVE THERAPIST

The paper by Spiegel and Kahn (2001) raises a very important issue; and we can only agree that it is surprising how rarely the literature deals with the following question: How should we handle the situation when a colleague asks us to participate in the treatment of a patient as an *adjunctive* therapist. The provision may involve treatment of a symptom or some supplementary procedure the colleague is not familiar with, therefore, the colleague asks for the help of a hypnosis expert.

There are many considerations we have to make in these cases:

- What is the content of the request? Are we facing unrealistic expectations (e.g.: “Terminate the symptom in one or two sessions”)?
- What is the relationship between the referring colleague and us? Is there any factor that would prevent cooperation from the beginning? Can we share the patient noncompetitively?
- What is even more important for our topic: How can relational affairs follow this situation? Can a patient “be present” in two relationships? Isn’t there a danger that the relationship with the originally adjunctive therapist becomes deeper, and the patient is “enticed” from the original therapeutic relationship? Or: What if the patient feels the work with the new therapist is faster and more effective, and he would be inclined to terminate the original relationship? Complicated and intricate conflicts may arise even from the seemingly simple cases.

The authors think it is a good solution for the two therapists if they hold continuous and detailed consultations with each other, including meeting in person, but if this cannot be organized, at least the original therapist should receive the records of the adjunctive sessions. It is also important that the patient receive some preliminary information about the planned steps, including their advantages and risks.

Adjunctive hypnotherapy was requested for a female patient – who had been in therapy with the primary therapist for eight years – for the alleviation of her severe abdominal pain. The atmosphere of the session with and the pleasant, permissive, and informal style of the adjunctive therapist were very refreshing for the patient, which was in sharp contrast with the working style of the primary therapist. Upon the great difference between the relationships with the two therapists, the patient spontaneously recalled the period when she was toilet-trained. The cooperation and regular consultations between the two therapists made it possible to keep the process on track as planned originally: The adjunctive therapist concentrated on the symptom, while the elaboration of the arising relationship-patterns remained with the work of the primary therapist.

This pattern was evident in other cases as well: The difference between the two therapists’ relationships helped identify transference relationships, which was worked through with the primary therapist. It also happened that different transference relationships developed with the two therapists: One took on the maternal, the other the paternal role, and complementing the other’s role for a while, the two therapists provided parental relationship patterns to the patient.

Early works have already recognized that in the hypnotic situation, very deep, special relationship develops between hypnotist and patient. This is well reflected in Janet's concept of "somnambulistic passion", when he described hypnosis as a "special form of love", or in Bernheim's line of thought, when he compared hypnosis to a parent-child relationship (although neither of them were psychoanalytic authors), or in Binet's comparison of the hypnotized person to a "fervent lover", for whom nobody else exists other than the beloved person.

The concept of "rapport" as used in mesmerism meant a special relationship between hypnotist and subject built on mutual attraction, intimacy, and strong emotional elements. In his early works, Freud did not yet use the expression "transference" when writing about the topic, but used the term "Übertragung", the German equivalent of rapport. Although the definition of rapport is far from being uniform among the authors today, nevertheless, they describe it with related concepts like "common focus of attention", "same wavelength", "harmony" (Bernieri, Gillis, et al., 1996; Cappella, 1997; Kendon, 1979; LeFrance, 1982). The most useful frame for the present train of thoughts is provided by the rapport notion of Tickle-Degnen and Rosenthal (1990), especially, since they define this aspect of interpersonal relationship a general level. In their approach, the mutual attunement of the partners is very pronounced; "forging" the two of them (in case of a dyad) together into a single unit, thus, the connection between the partners is combined into a "dynamic whole". As we saw in Chapter 2, Tickle-Degnen and Rosenthal (1990) described the conditions of such a high level of harmony: a) mutual attention, b) positivity, and c) coordination.

The early psychoanalytic conceptualization – as shown in the analysis by Weitzenhoffer (1989) – regarded hypnosis as a definite phenomenon of transference, where the hypnotized person can relive his infantile and passive desires. Naturally, this also means that hypnosis was seen as a regressive state in which the subject returns to a more primitive, less differentiated mode of functioning. Hypnosis creates a situation where the subject has the opportunity to satisfy two of his fundamental, unconscious, and infantile needs: (1) unconditional subordination to an authority figure, (2) the need for omnipotence, satisfied through identification with the hypnotist, whose image is built into the ego-ideal of the subject. The induction itself contains steps and maneuvers that activate and ignite transference.

In parallel with this, similar processes take place in the hypnotist, too, since he is also present in the situation with his own special needs, where his countertransference originates from. It is well known that in the psychoanalytic approach, adult love-relationships and parent-child relationships can be traced back to the very same infantile desires and needs.

As compared to the early, classical psychoanalytical approach, the most elaborate psychoanalytic conceptualization of hypnosis, but combined with the views of ego-psychology is that of Gill and Brenman (1959); they talk about the *reciprocity* between subject and hypnotist. They define hypnosis as a *state of modified ego-function*. They do not reject the existence of transference, but they do not attribute such a single and causal role to it in bringing about the changes as did the early authors. They described a new form of regression in addition to complete regression (where the autonomy of the ego is decreased as an influence of the id and the environment), namely, **regression in the service of the ego**, where only a sub-system of the ego exhibits the above mentioned decrease in autonomy, with full "knowledge and acceptance" of the whole ego. This kind of regression is brought about

by two effects: (1) sensory-motor and mental deprivation, and (2) intensive emotional charge of the relationship, including transference. These two effects mutually facilitate each other, deepening the regression over the affected ego-part.

In later hypnosis theories (for greater details, see Varga, 2000), the emotional relationship still re-echoes, although less intensively, when the authors analyze the hypnotic relationship – those who discuss the *relational* nature of hypnosis at all – often within the topic of transference. Mason regards the relationship as the most fundamental of all hypnotic phenomena. Wolberg looks at the hypnotic dyad as a two-way feedback system. Lindner talks outright about “mutual rewards”, emphasizing that the experience of hypnosis can be rewarding for both participants of the hypnotic situation. The early works of Watkins and Spiegel’s (1959) approach traces hypnotic trance back to transference, but the later works of the Watkins couple (Watkins and Watkins, 1986, 1990) already differentiate between forms of transference that *facilitate* and *inhibit* hypnosis. The review by Weitzenhoffer (1980) also looks at the hypnotist-subject pair as a “transference-countertransference dyad”.

We have to emphasize Erika Fromm’s approach among the hypnoanalytic authors, who differentiated **three fundamental forms** of transference: (1) infantile dependency, (2) Oedipal, and (3) sibling forms. Eisen adds to these fundamental forms the so called “*seductive*” type, where the patient attempts to seduce the hypnotist more or less openly, and the *sibling* type, where he finds the motive of competition so strong that he regards it as an independent type of transference, in which the hypnotist is the “rival”.

In the hypnosis literature, however, the approach of transference seems to be gaining greater and greater independence from the theoretical and conceptual system of classical psychoanalysis. It can be justly brought up that since hypnotists are generally not trained in psychoanalysis as well, it cannot be expected of them to interpret and analyze the patients’ transference. Thus, in a hypnotic situation, in the real mutual relationship between subject and hypnotist, the occurrence of transference and even countertransference is natural, and in fact, necessary and essential part of hypnosis.

Shor’s (1962) approach was a milestone with respect to both interactional theories and transference. According to Shor, the essence, the pitch and marrow of hypnosis becomes visible only if we think of it as a dynamic interaction between two real persons. White’s (1941) early two dimensional model of hypnosis, where *hypnotic role playing* and *trance* constituted the two pillars of his approach, was supplemented by the interactional dimension by Shor, and called it **archaic involvement**. By archaic involvement Shor meant those archaic, primitive modes of relating to the hypnotist that can be traced back to the love relationships in one’s early life period. Barber (2008) characterized archaic involvement as a quickly developing closeness-experience toward the hypnotherapist, in which the patient attributes increased closeness, power, and importance to the therapist.

In order to measure this dimension, Nash and Spinler (1989) developed a paper and pencil test (whose Hungarian version, and whose version adapted to the interactional situation were applied in several of the studies presented here).

In Diamond’s (1987) system, the hypnotic relationship is determined by four factors: (1) *therapeutic or working alliance*, (2) *symbiotic or fusional alliance*, (3) *real relationship*, and (4) *transference*. It must be noted here that in addition to the dimension of transference, there may often be a strong emotional strain on the hypnotist (too); for example, when at the irrational level of working alliance, the subject attributes idealized, omnipotent power to the hypnotist, or when within the framework of symbiotic alliance, the subject incorporates the

hypnotist illusively in its bodily existence. Regarding countertransference, however, the hypnotist, too, can differentiate only between “there are favorable and unfavorable” forms, although he makes notable “individual” dyadic analyses, analyzing the development of the relationship between hypnotist and subject (or patient) in its progression, considering the dyad as the unit of analysis. It is a favorable form of countertransference that helps the therapist attune to the various characteristics of the patient’s personality, but countertransference is detrimental when the hypnotist identifies with the internalized objects of his subject, therefore, his behavior will probably elicit only fear in the subject.

Spiegel and Kahn (2001) warn us that “it is essential to understand that these strong feelings develop regardless of the theoretical modality in which the therapist is working” (p. 343), which means that it is far from being typical only of analytically oriented professionals.

Baker and Nash (2008), characterizing modern psychoanalytic approach, emphasize that maturity, stability, and structural integrity of the ego have been coming to the fore more and more. Accordingly, the *present*, real relationship between the therapist and the patient is getting greater and greater role, which is already independent of transference. The hypnotic relationship offers a special opportunity to support – among other things – the emergence of adaptive interpersonal involvement in the patient. In the course of the hypnotic relationship, the goal is to build a safe, gratifying, dependable, and facilitating emotional climate.

“The hypnotic experience narrows the gap between the ‘all-powerful’ other and the ‘helpless victim’ patient by establishing neutrality, equanimity, and shared controls of the trance and by structuring self-mastery and success experiences in hypnosis” (p. 441).

8.3. THE PHENOMENON OF COUNTERTRANSFERENCE IN HYPNOSIS

In the practical evaluation of countertransference – or in a broader sense: the emotions arising in the hypnotist toward the subject – the “schedule” we saw with regards to transference seems to be repeated. Initially, the occurrence of countertransference was attributed to the weakness and deficiency of the hypnotist. For example, Orne thought that the reason is that the hypnotist is not able to handle the intensive relationship developing with his subject. Lindner had a similar line of thought, accusing hypnotists with countertransference that they are under the unconscious illusion of grand omnipotence (see on this Weitzenhoffer, 1989).

Later it was judged less severely: Countertransference was seen as an occasional phenomenon that can be controlled if one had appropriate skills. Finally, more recently, countertransference is being more and more cheered as a *natural element* of the hypnotic relationship.

Eisen (1993) finds it important that the hypnotist recognizes his own countertransference reactions and in stubborn cases seeks supervision, but if his relationship with the patient is durable enough, even discussing the issue with the patient may work. Mende (1998) even gives direct advice as how the therapist can elicit transference intentionally in hypnotherapy, and how he should exhibit countertransference considering the personality type based on the defense structure of the patient.

In his review article about the past and present of psychoanalysis, this is what Peebles-Kleiger (2001) says about the changes in the conceptualization of transference:

“Described differently, no longer is the psychoanalyst seen as the objective, clear-visioned observer, discovering the true meanings of the patient’s behavior. Instead, in a two-person psychology, truth is relative, behavior is unique to the particular patient-analyst pair, and meaning is constructed rather than unearthed. Patients do not bring us their transference to be projected onto us, the blank screens. Instead, patient and analyst cocreate the transference between them – the patient responding to the idiosyncrasies of the analyst, who simultaneously is responding in his or her own way to the patient. The analyst cannot be objective but instead must always observe subjectively” (p. 152).

8.4. RESONANCE

The summary by the Watkins couple (Watkins and Watkins, 2000) offers an image of the emotions arising in the therapist that is different from those seen in most of the previous authors. Namely, Freud definitely condemned it if the therapist let its emotions flow freely and did not keep a reserved, objective (emotional) passivity. The Watkinses, however, point out that the emotional presence of the therapist is not necessarily a countertransference. They differentiate the phenomenon of “**resonance**” from the form they also deem harmful. In resonance, the therapist gets connected with the self-representation of the patient, temporarily identifies with it, and has a common experience with the patient: the therapist also suffers or enjoys whatever the patient experiences in the therapy. According to the therapeutic self theory, Watkins finds it exemplary if the therapist keeps the better part of his self at the level of objective distance, and gets emotionally involved in the patient’s experiences only with the smaller part of his self. This way, he can follow the events in therapy from two perspectives, and can therefore achieve deeper understanding. At the same time, the patient can build counter-resonance, identifying with the therapist, including the therapist’s objective-understanding self-part. Thus, a mutual resonance and a flow of ego-strength develop in the therapist-patient dyad. This togetherness is essential for abreaction, because this is how the patient gets enough ego-strength to dare immerse in re-living the trauma, and dares face its horror. If this support that is manifested in the emotional togetherness is absent from the therapist, bringing the trauma to the surface may be re-traumatizing, instead of being useful, and – due to the weak ego of the patient – may even lead to a psychotic reaction. Naturally, it follows from all this that it is the personality of the therapist rather than the technique or approach that is the essential element in the patient’s change (Watkins and Watkins, 2000).

Watkins (2000) demonstrates this in an example from his practice. He followed many very violent abreactions in the treatment of battle neuroses by hypnotherapy. In one occasion, a soldier “gave” his superior who had caused him much suffering “what he deserved” together with the therapist. When the patient heading the hospital unit was once relating to Watkins what an outrageous affront he had to suffer because of his colonel, it slipped out of his mouth “if I could ever get him on my operating table”. As a response, Watkins – the therapist – put a pillow on the table and said:

“There he is. What do you want to do?” And for the next 10 minutes, he, this 6 ft. 3 in., 220 lb., officer, (and I) committed murder, he cursing and slashing with his “scalpel,” while I was shouting, “Give it to the son of a bitch. He deserves it” (pp. 330-331).

Regarding cases like this, Watkins points out that he was asked many times if he was not afraid of becoming a target of such an assault. His response was “no”.

I was resonating with him. I was not the target, an object lying on his operating table. We were therapeutically allied in a togetherness – but I was glad that the commanding officer and not me was the object of his transference. That is the difference between resonance and transference (p. 331).

The Watkinses think that the interpretation of transference only makes the patient smarter about what his problem is and how responsible he is, but does not increase the patient’s strength to find a solution to it. Resonance on the part of the therapist, however, means *personal emotional investment*, as opposed to transference, to which the therapist just stays a passive target.

It is a good example of such an investment, when working with psychotic patients, the so called *creative self-mothering* technique is applied: The patient imagines himself both as a child and as a parent, and then his ego begins to take care of his child-self (Murray-Jobsis, 1993). In this process, the therapist practically takes the part of the other parent, providing a more complete corrective experience in this active reparenting process.

Nova Science Publishers, Inc.

PART III: THE PHENOMENOLOGY OF THE HYPNOTIC RELATIONSHIP

INTRODUCTION

When analyzing the phenomenological aspect of the hypnotic interaction, it is important to differentiate the phenomenology of the hypnotic interaction from the construct of *hypnotic susceptibility* based on behavioral response. To this end, we will examine the (statistical) relationship between “behavior” and “experience”.

After this, we will list the *methods* we have developed or adapted with the aim of grasping the phenomenological aspect from an interactional approach.

We will study how the “*hypnotic relationship*” can be characterized by these methods, that is, if it can be differentiated from other dyadic relationships or situations.

This is the part where we will review those of our results that let us see a hitherto essentially unexplored world, namely, that the *hypnotists* are present in the situation of hypnosis with rich subjective experiences, and we will also see if subjective experiences (of the subjects) can be simulated.

Nova Science Publishers, Inc.

THE RELATIONSHIP BETWEEN THE BEHAVIORAL AND SUBJECTIVE INDICES OF HYPNOSIS

Hypnotic susceptibility is a key concept in the modern approach of hypnosis; there are several standardized scales available for its measurement that are used all over the world (for a review see, e.g., Laurence, Beaulieu-Prévost, and du Chéné, 2008). It is a common characteristic of these scales that the applied test suggestions are determined verbatim and it is measured how the subjects react to them. The effects of the suggestions are scored along strict, and also standardized behavioral criteria that can be observed by an onlooker. For example, the response to the suggestion that an outstretched arm becomes heavy is considered “positive” if the person’s arm lowers at least 6 inches (15 centimeters) by the end of the given text and period. If the distance is less, or the movement reaches 15 centimeters only after the time limit, the score is “negative”. The hypnotic susceptibility of the person under study can be scored along similar test suggestions.

Several versions of the behavioral scales have been developed: There are scales of individual and group testing, for adults and children, and for laboratory and clinical use (for a detailed review, see, e.g., Sheehan and McConkey, 1982; see also Appendix I). The various forms originate in the “Stanford Hypnotic Susceptibility Scales, Forms A and B” (abbreviated as SHSS:A and SHSS:B) published by Weitzenhoffer and Hilgard (1959). In addition to the SHSS:A and SHSS:B, form C (SHSS:C) was also developed, including more difficult and other kinds of test suggestions (in Hungarian, see Greguss, Bányai, et al., 1975). The most widely used group version, the Harvard Group Scale of Hypnotic Susceptibility – HGSHS:A – was also derived directly from SHSS:A (Shor and Orne, 1962; in Hungarian: Greguss, Bányai, et al., 1975).

The greatest merit of the behavioral scales is that they can be administered relatively easily, and that they give a numerical result about the performance of the test suggestions. The fact that the scoring is done along external criteria (behavioral responses) gives a framework that can be checked by several observers, because it can be observed directly if the applied inductions or suggestions were effective or not. The scales use many kinds of different suggestions within the behavioral dimension: motor responses, motor inhibition, challenge suggestions, etc.

Hypnotic susceptibility measured by these scales proved to be a very strong construct in hypnosis research. Repeated measurements have shown that hypnotic susceptibility scores highly correlated with the original scores of the same samples even after 20-25 years (Hilgard, 1987; Piccione, Hilgard, and Zimbardo, 1989). The possibility of an objective and repeatable measurement that is uniform in its principle and practice all over the world was invaluable for hypnosis finding its place in the world of science.

On the other hand, all this has led to a kind of one-sidedness, and researchers of hypnosis have either totally neglected the **experiential** side of hypnosis, or the procedures serving to measure the subjective aspect were validated by a behavioral scale – faithfully following Hilgard’s admonition: “Any satisfactory test of hypnosis, regardless of its special purposes, can be expected to correlate with a scale based on such samples of hypnotic behavior” (Hilgard, 1978-79, p 68). Consequently, there was no chance of receiving a valid picture about the relationship between the behavioral and subjective aspects of hypnosis, because the measurement of the latter was matched to the behavioral scales from the beginning.

This was so, despite the fact that the most prominent researchers of the field kept emphasizing the importance of studying the experiential side of hypnosis:

- “No matter what viewpoint one takes toward hypnosis, it is impossible to explain hypnotic phenomena without some appeal to the operation of intrapsychic, or internal subjective processes (Sheehan, 1979, p. 219).
- “In sum, the principal features of hypnotic state are seen as changes in the subjective experience...” (Orne, 1959, p. 297).
- “...since the real focus of hypnosis appears to lie in the subjective experience of trance” (Orne, 1959, p. 298).
- “hypnotic phenomena involve genuine changes in the subject’s experience that cannot be explained away in terms of faking or sham behavior” (Spanos and Barber, 1974, p. 508).

Let’s now review the concepts and methods of investigation aiming at the experiential side of hypnosis; after that we can return to the question of the relationship between the behavioral and experiential sides.

9.1. MEASURING THE EXPERIENTIAL SIDE OF HYPNOSIS¹

The very rich topic of the experiential world of hypnosis will be reviewed along three main topics. First, we shall deal with the subjective depth of hypnosis, then we will review the methods tapping the experiences generally occurring in hypnosis, and finally, we shall look at the hypnotic-like experiences that can occur independent of hypnosis.

¹ The present section heavily builds on the related part of Varga (1991).

9.1.1. Measuring the Subjective Depth of Hypnosis

The behavioral scales measure susceptibility, that is, the general responsiveness to hypnotic suggestions under the given conditions very well. However, they are insensitive to the actual subjective depth of hypnosis, that is, to the dynamically changing nature of the state (which can vary even within a session) (Tart, 1970b; Perry and Laurence, 1980; Vassend, 1988). There are several depth-measuring instruments (for a review, see Sheehan and McConkey, 1982), most of them ask the subjects to estimate their own depth of hypnosis. Depth measurement can be done in self-hypnosis, too (Kahn, Fromm, et al., 1989).

Depth scales: The aim of the methods estimating the momentary depth of hypnosis is to measure how deep the person subjectively feels the hypnosis to be. They can be classified along many respects:

- They differ in the number of steps on the scale; ten or eleven point scales are the most widespread.
- The different procedures also differ in how they define the individual steps and the scale itself. In some versions only the two extreme values are pinned by the experimenter, in others each step is defined, in still others the scale of definitions comes in fives, tens, or even more.
- The definitions of the scales also differ in whether or not they determine an upper – or rather lower – limit of achievable depth.
- Subjective depth scales also differ in how they instruct the subjects. Sometimes the experimenters “forecast” automatic responses that pop up immediately, sometimes they expect a response that is based on volitional, conscious consideration.
- It is another organizing principle when the different scales ask for a depth measurement: under hypnosis or after hypnosis, in the waking state. Judgments made under hypnosis may vary depending on how many times they are asked for: sometimes they ask for it only a few times, sometimes they require a response several times, for example, after each suggestion, and there are procedures that make continuous judgment possible.
- Finally, we can differentiate scales on the basis of the mode of judgment: They ask for a report verbally or some other way (e.g., by turning a knob).

Shor’s phenomenological method: As opposed to the previous methods, here it is not the subject, but a trained experimenter – usually the hypnotist – who judges the depth of hypnosis. This judgment is based on the report of the subject after the hypnosis session, where the subject reports his or her experiences freely, usually to the hypnotist. The depth of hypnosis is not conceived as one-dimensional by this approach, but along three or five sub-factors (Shor, 1962). The main dimensions are as follows:

- 1.) Involvement in hypnotic role playing: motifs and cognitive contents on the basis of which the subject gives up his or her volition and awareness, and follows the hypnotist. This role taking is not conscious in case of real involvement.

- 2.) Trance: giving up reality testing, acceptance of facts that contradict everyday logic, acceptance of facts that are in contrast with the usual, waking facts as real.
- 3.) Archaic involvement: The interpersonal nature of hypnosis, the archaic relationship between subject and hypnotist.

The three main dimensions are supplemented by the following variables: (1) sleepiness, (2) relaxation, (3) vividness of imagery, (4) absorption (immersion in the state, giving up the self), and (5) accessibility to unconscious material.

Each of the arising 8 dimensions are judged by the experimenter (hypnotist) on a 6 point scale on the basis of the subjective report on the whole hypnosis or on its part. The criterion of the judgment is how convincing the individual phenomena are subjectively. In Shor's opinion, the amount of the individual experiences is less important than their expression and depth.

Obviously, the method relies on the sincere self-disclosure of the subject, and on the open, "informal" relationship between the subject and the experimenter. Despite this kind of relationship, the experimenter must guide the subject to some extent, for he has to ask some questions regarding all of the dimensions.

Although this method is one of the most comprehensive procedures – it treats several dimensions and it is based on a thorough and one of the most accepted theoretical backgrounds of hypnosis – it has not been used widely, probably – as can be sensed from the above description – because of its complexity. The reliability and validity testing of the method is also missing. It is also unfavorable that the experiences are assessed and the evaluations are made usually by the hypnotist; this can result in distortions, if for nothing else, for his involvement in one of the main dimensions, in dimension 3. After all, the subject – in accordance with the theory – may be especially motivated to please the hypnotist just because of their deep relationship.

The review of the methods dealing with the subjective depth of hypnosis hopefully conveyed the idea that momentary depth of hypnosis is an important concept, and that it is different from the other dimensions of hypnosis. We could also see that there is no single, fully developed method for testing the question; the researcher chooses a method from the multitude of different procedures according to the requirements of the given study.

9.1.2. Procedures Revealing the Experience of Hypnosis

In the following, we are going to talk about procedures that reveal the experience of hypnosis more widely, after an actual hypnosis session, studying the subjective experiences under hypnosis; that is, they refer not only to the depth of hypnosis or to hypnotic-like experiences outside the setting of hypnosis.

Field's questionnaire: "Inventory of Hypnotic Depth". One of the most widespread procedures mapping the hypnotic experience is the questionnaire of 38 items constructed by Field and Palmer; the items were selected from 300 items by HGSHS:A (the above mentioned behavioral group-scale) on the basis of the degree of their positive correlation (Field, 1965). The rest of the items cover the most various hypnotic experiences: wakefulness-sleep,

concentration of attention, difficulty of remembering, hallucinations, visual and bodily sensations, distorted time perception, etc. The questionnaire is filled out by the subjects after hypnosis, indicating “yes” or “no”, whether the given item was true or false of their experiences. This method makes it possible to compare the experiences of people scoring the same on the behavioral scales, or the experiential side of various types of hypnosis can also be compared (see, e.g., Lynn et al., 1985).

Kelly and Matheson’s questionnaires: “Hypnotic Experience Questionnaire” (HEQ) is a 47-item questionnaire for measuring hypnotic experiences (Matheson, Shue, and Bart, 1989), based on the theories and phenomenological works of J. Hilgard (1979) and Shor (1962). The items fall into five factors: (1) Dissociation/Altered State, (2) Relaxation, (3) Rapport, (4) Visual Imagery, and a negatively correlating factor, including anxious self-reflective experiences: (5) cognitive consideration. The individual items are rated by the persons on a five-level Likert-type scale. HEQ is a questionnaire developed for research settings, as reflected by many of its items (e.g. “Sometimes I completely forgot I was in an experiment”).

Selecting 16 items from HEQ, Matheson, Shue, and Bart (1989) developed a short form that can be applied in clinical practice, too (“Hypnotic Experience Questionnaire – Shor Form – HEQ-S). The items of the short form fall into three factors: (1) Relaxation, (2) Dissociation/Altered State, and (3) Rapport. The researchers chose HGSHS:A as a validation measure for HEQ-S.

Pekala’s questionnaires: Pekala’s “Phenomenology of Consciousness Inventory” (PCI) (Pekala, 1991; Pekala, Steinberg, and Kumar, 1986; Kumar and Pekala, 1989) is a 53-item questionnaire with 12 major and 14 minor dimensions aimed at assessing the experiential aspect of any situation – for example, hypnosis – retrospectively (e.g., Morgan, 1987, measured the experiential aspect of “terpsichoretrancetherapy”, a therapy based on active dance, with PCI). The items describe extreme emotions, altered sensations, changes in imagery, attentional and self-awareness factors, memory and arousal functions, and similar altered experiences. The phenomenological intensity scores for each item with regards to the previous stimulus-situation in question are judged by the subjects on a 7-point scale positioned between two opposing statements.

**Table 9.1. Correlations between PCI scales and hypnotic susceptibility
(based on data of Pekala and Forbes, 1988)**

| | |
|--------------------|-------|
| Altered Awareness | +0.55 |
| Volitional Control | -0.52 |
| Altered Experience | +0.50 |
| Self Awareness | -0.49 |
| Altered Time Sense | +0.45 |
| Altered Perception | +0.39 |
| Altered Body Image | +0.38 |
| Absorption | +0.32 |
| Rationality | -0.32 |

Pekala (Pekala and Kumar, 1984, 1987) developed a shorter version of PCI – PCI:SF – (Pekala, 1988), which included only those items from the original test that showed sufficiently high correlations with hypnotic susceptibility as measured by HGSHS:A. Thus, the correlation between PCI:SF and HGSHS:A score is around $r=.63$.

Of the items of the original test, the subsystems shown in Table 9.1 exhibited correlations with the phenomenon of hypnosis, and not with that of altered states in general (based on Pekala and Forbes, 1988, the table shows the directions and magnitudes of correlations with hypnotic susceptibility).

Pekala and his colleagues developed a method of evaluation for PCI:SF that is able to give a reliable prediction for the HGSHS:A-score by considering the responses to the individual items with different loadings and by other mathematical corrections. This means that it is not necessary to administer the standard procedure of HGSHS:A; it is sufficient to fill out the PCI-SF questionnaire with reference to a two-minute resting period with closed eyes inserted into the state elicited by hypnotic induction aimed at bodily, and mental relaxation. (Further details of the procedure, the exact procedure of the calculations, and the verbatim description of the hypnotic induction can be found in Pekala, 1988, 1990.)

This method is all the more significant, as it is able to predict the HGSHS:A score, that is, the person's hypnotic susceptibility by a much shorter induction and of a completely different style than the HGSHS:A itself. This way Pekala's procedure can be administered in situations where we have no time for or we do not want to make it conspicuous that a formal measurement (estimation) of hypnotic susceptibility is taking place.

More recently, Pekala' group developed a measure that reflects both the person's behavioral reaction to hypnosis producing a "trait"-like score and the "state"-like value of the momentary experience of the subject (Pekala, Kumar et al, 2010a, 2010b). The authors consider this method, called PCI-HAP, as a general measuring tool of trance state; its score is arrived at through a complex procedure including pre-assessment questions regarding the hypnotic depth the subject expects to achieve in the subsequent hypnosis, a silent period embedded in a real hypnotic situation, and the experiential report after hypnotism.

Fromm's questionnaire and studies on self-hypnosis: In order to compare self-hypnotism and hetero-hypnotism, Fromm (Fromm, Brown, et al., 1981; Fromm, Lombard, et al., 1987-88; Eisen and Fromm, 1983; Kahn, Fromm, et al., 1989; Lombard, Kahn, and Fromm, 1990) designed a lengthy questionnaire, relying on the experiences assessed by clinical interviews and experience-diaries.

This research revealed that there are subjective elements that differ in hetero- and self-hypnosis (Fromm, Lombard, et al., 1987-88): In self-hypnosis people are more open to their deep, inner, unconscious material, as opposed to heterohypnosis, where self-defense is stronger; as a result, building the material of the experience-diaries written about at-home self-hypnoses into heterohypnosis promises fruitful therapeutic possibilities (Eisen and Fromm, 1983). The researchers analyzed the relationships with subjective depth of hypnosis and the role and types of imagination, and their relationship with hypnotizability in separate papers (Kahn, Fromm, et al., 1989; Lombard, Kahn, and Fromm, 1990). It is interesting that although they developed a very complex questionnaire at the beginning of the research, they still based their more recent work on the content analysis of the original experience-diaries.

Unfortunately, it is very difficult to make generalizations from this research, not only because of the concentration on self-hypnosis, but mainly because the experiential material is

based on a sample of only 30, only highly susceptible persons (scoring 9-12 on HGSHS:A or SHSS:C).

Methods developed for supplementing the behavioral scores: Several research teams have come up with the idea of supplementing scores of the traditional behavioral scales with scores based on inquiries about subjective experiences. For example, Gwynn, Spanos, et al. (1988), as opposed to the conventional “objective” score on HGSHS:A, introduce a subjective dimension by asking the Ss to rate the experiences connected to the test-suggestions, and calculate an *involuntary* and a *compliance* score as well.

Kirsch and his colleagues (Kirsch, Council, and Wickless, 1990) suggest to supplement the behavioral scoring on the HGSHS:A with subjective scoring, where “behavioral” refers to the self-scoring of the subjects along with objective criteria, and subjective scoring is based on a new scale, developed by these authors to measure the subjective experiences associated with the test-suggestions on the HGSHS:A. (This new scale – called “Subjective Experience Scale for HGSHS:A” – words each item so as to capture the intended nature of the suggested effect instead of facing the subjects with the overt criteria, as it is the case in the standard response booklet).

The evaluation of the questionnaires: At the evaluation of the questionnaires revealing the experience of hypnosis, we can find it on the positive side that they can be administered quickly, they can be scored easily, and they produce a well-manageable numerical score.

However, more serious issues have to be considered on the negative side: One of the most important problem is that the validity studies of these questionnaires usually use the scores of the behavioral scales – mostly the HGSHS:A, because of the large sample size – as criteria, although the authors justify the necessity of experience-questionnaires by arguing that the behavioral responsiveness measured by the standard scales do not tap the experiential side of hypnosis. Adjustment to the behavioral scales is justified if the aim of the questionnaire is to predict hypnotic susceptibility (as is the case with questionnaires revealing hypnotic-like experiences outside of hypnosis). In procedures where the aim is to reveal experiences characteristic of hypnosis, however, it is absurd to select the items on the basis of the behavioral scales, because this way we will lose the possibility of mapping the experiences that are independent of behavioral performance.

It is also unfortunate that some studies use only highly hypnotizable subjects, as if assuming that only they can have experiences characteristic of hypnosis. This way, the study of the experiences of the majority of the population, those of the moderately susceptibles, and those of the lowly susceptible persons are left out.

Another aspect that has to be kept in mind with regards to the questionnaires arises from the very fact that they are questionnaires: Since a heightened suggestibility is present in most of the subjects, it is very unfortunate to face the subjects with “ready made” statements of experiences, as if to word the statements characterizing their experiences “for them”.

9.1.3. Procedures Revealing Hypnotic-Like Experiences Outside of Hypnosis

In this section, we are going to review those works that reveal hypnotic-like experiences in the waking state and try to predict hypnotic susceptibility on this basis. Thus, these

procedures can be applied without a person actually going through hypnosis, for their aim is to *predict* hypnotizability, sometimes even to “bypass” actual measurement of hypnotic susceptibility.

Shor’s questionnaire: The 44-item questionnaire developed by Shor et al. (1962), that came to be known as the “Personal Experiences Questionnaire” (PEQ), inquires into experiences that are not directly connected to hypnosis, but can be related to it: For example, struggling to keep awake at lectures or concerts, just staring blanc, having deep religious experiences, experiencing strange bodily sensations, etc.

Shor thought that people who often had such experiences are more inclined to relinquish general reality control temporarily. Shor calls this capacity *tranceability*, differentiating from the concept of hypnotizability. In this self-report questionnaire, the subjects rate the frequency, depth, and intensity of the given experience on a 7-point scale. The correlations with the subsequently measured hypnotic susceptibility scores revealed that the frequency scores did not correlate with hypnotizability, but intensity did ($r=.45$). In the higher regions of hypnotizability, the correlation is even stronger ($r=.84$).

Follow-up studies using only highly susceptible persons (Hilgard, 1968), however, were far from receiving high correlations (only $r=.10$). On the basis of all this, we have no clear view of the relationship between hypnotic-like experiences and the full range of hypnotic susceptibility, that is, not only the highly susceptible region. According to Shor and his colleagues’ interpretation, the capacity-component is important in the higher regions of hypnotizability, and this is why their method is more sensitive in this region; in the region of the low susceptibles, the non-capacity factors have a greater predictive power. Nevertheless, it is a noteworthy result that the frequency values of these “strange” experiences are not correlated with hypnotic susceptibility, which means that low susceptibles can also be score high here.

Ås’ questionnaire: Ås (1962, Ås et al., 1962a, 1962b) used 18 items from Shor’s questionnaire mentioned above, added 42 questions selected on the basis of the data in the literature, and created a 60-item “Experience Inventory” (EI). He grouped the items into nine categories:

- A: Altered state, weakening of general reality-orientation,
- B: Tolerance for logical contradictions,
- C: Role taking,
- D: Dissociation, exclusion of distracting stimuli,
- E: Tendency to relinquishment of self-control,
- F: Tolerance for regressive experiences,
- G: Constructive regression (humor, creativity)
- H: Facing up peak experiences and the unknown bravely,
- I: Basic trust, interpersonal relationships.

The correlations between Ås’s questionnaire and the various forms of SHSS range between $r=.31$ and $r=.47$, giving slightly different values for males and females (men tend to be characterized by impulsivity and tolerance for regressive experiences, while alterations of

the mental state, achieved through social effects, involvement in reading, or experiences contradicting logic, are more typical of women). As analyzed the predictive power of the individual items, and he found that items that showed high correlations with hypnotizability in one sample, failed to do so in another sample. Thus, the predictive power of the questionnaire with respect to hypnotizability is worse than expected (for the detailed data, see Hilgard, 1968).

Tellegen and Atkinson's absorption questionnaire: The concept "absorption" refers to the ability of the individual to be open to experiences – even independently of hypnosis – and be involved in them completely. At these times, the perceptual, motor, imagery, and mental resources are completely occupied by the attended object. Tellegen and Atkinson (1974) developed a 34-item true/false questionnaire (Tellegen Absorption Scale, TAS) for the measurement of this trait that is independent of all other personality traits.

"Absorption" is considered to be a central component of hypnotizability, for the suggestions call for the subject to concentrate on the hypnotist's communication and on its effects completely. Nevertheless, Tellegen's test is only moderately correlated with hypnotic susceptibility: Tellegen and Atkinson reported $r=.43$ with the modified version of HGSHS:A in their original study; the correlations in the studies by Pekala et al. (1985) was $r=.38$; in Ronnestad's (1989) study the correlations with SHSS:C and HGSHS:A were $r=.39$ and $r=.27$, respectively; while Lynn and Rhue reported an even more modest correlation, $r=.25$.

Ronnestad (1989) points at autonomy as a moderating variable of personality traits in the background of the much lower correlations than expected on the basis of theoretical considerations. Pekala et al. (1985) raise the possibility that the questionnaire that measures involvement probably covers the *trait* that is manifested in the phenomenological experience elicited by the situations giving rise to altered states of consciousness. It is Pekala's main aim to develop a *state* questionnaire in addition to this trait-like approach (see more on Pekala's test separately).

Kihlstrom and colleagues' phenomenological questionnaire: Closely related to Shor's (1979) 8-dimensional hypnosis theory, Kihlstrom, Register, et al. (1989) developed a questionnaire in which each of the eight dimensions is represented by five items. At the development of the "Wisconsin Experience Questionnaire" (WEQ), seven experts created dichotomous items that cover the dimensions in Shor's theory, several dozens in each dimension; factor analysis left 8×5 (i.e., 40) items that had the greatest factor load. Since the dimensions of Shor's theory are represented by separate items, the eight areas – trance, non-conscious involvement, archaic involvement, sleepiness, relaxation, vividness of imagery, absorption, and access to the unconscious – can be measured individually.

When the items of WEQ and 34 items of TAS (Tellegen and Atkinson, 1974) were administered to a large sample, the subsequent main component analysis showed 26 items that had factor loadings higher than .35. The validity study of the questionnaires administered together revealed a correlation of $r=.14$ between the 26 "main" items of WEQ and HGSHS:A, which is a statistically significant value (due to the large sample size), but its value is extremely low. (The TAS-part of the questionnaire correlated with HGSHS:A $r=.20$). The subscales representing the different dimensions also showed very small predictive powers: Their correlations ranged between $r=.03$ and $r=.17$.

J. Hilgard's studies: J. Hilgard (1979) conducted a large-scale research program in which she searched for personality characteristics that could be related to hypnotizability. Since no clear correlation between hypnotizability and traditional personality tests could be demonstrated in the hypnosis literature, J. Hilgard and her team wished to map the factors that would predict the degree of hypnotizability, relying on several hours of depth interviews. The questions covered the interviewee's current conditions and personality characteristics, interests, early childhood experiences, developmental patterns, position within the family, relationship with the parents, peer relation patterns, etc. After mapping the interviewee's experiences with regards to reading, arts, adventure, dangerous situations, religion, sports, aesthetic and musical experiences, and imagination and fantasy life, the authors tried to predict the subsequently measured hypnotic susceptibility of the subjects (on a scale of 0-12).

There were typical differences among the different groups of hypnotic susceptibility as to the way they related to their experiences. The highly susceptible group was characterized by deep, holistic involvement into the experience with strong emotional involvement, in the course of which they temporarily gave up reality testing. The low susceptibles, however, were usually characterized by an analytic attitude, the need for controlling the events, a detailing-cognitive attitude, a stronger reality-orientation, and competitive spirit, and they were also less inclined to follow others. The correlation between the involvement into different kinds of experiences – like reading, religion, etc. – and hypnotic susceptibility varied between $r=.15$ and $r=.22$ (J. Hilgard, 1979), that is, these correlations were rather low. It was an interesting finding that there was no difference between the low and the high susceptible groups in their relationship to certain experiences (e.g., imagination, extent of daydreaming (see J. Hilgard, 1979, p. 96 and p. 100)).

In the interpretation of this lower than expected predictive power, J. Hilgard argued that people may differ in area of involvement that constitutes the background of their hypnotic susceptibility. Thus, different factors or experiential situations – e.g., sport, religion, creative activity, etc. – may have a predictive factor in different individuals: An outstanding value in any of the areas may become the basis of a person's hypnotic susceptibility. This is the so called "path" or "alternative path" hypothesis about the relationship between personality characteristics and hypnotizability.

More recent studies still try to identify personality characteristics in the background of hypnotic susceptibility – still unsuccessfully. For example, Nordenstrom, Council, and Meier (2002), studying the relationship between the factors of the "Big Five" questionnaire and hypnotic suggestibility, arrived at the conclusion that there is no real relationship between these personality traits and hypnotic susceptibility.

Section summary: It is a general finding of research studying hypnotic-like experiences outside of hypnosis that although these studies approached the phenomena of experiences that could possibly be related to hypnosis from the widest perspective, no sufficiently strong predictor of hypnotizability as measured by the standardized behavioral hypnotic susceptibility scales could be identified, especially in the whole range of hypnotizability. Analysts of the question conclude that no paper-and-pencil test shows a sufficiently high correlation with hypnotizability so as to give an exact enough prediction of individual performance (Kihlstrom, Register, et al., 1989; Register and Kihlstrom, 1986).

BOX 13. THE SEPARATION OF THE BEHAVIORAL AND EXPERIENTIAL LEVELS IN HYPNOSIS²

The separation of the behavioral and experiential levels with respect to different phenomena of hypnosis is illustrated in the following:

One of the most often studied issues showing the divergence of behavioral and experiential data is the question of *involuntariness*, that is, the extent to which the behavioral response is accompanied by the experience of involuntariness as expected on the basis of the so called classical suggestion effect. Studies on involuntariness (Bowers, 1981; Farthing, Brown, and Venturino, 1983; Bowers, Laurence, and Hart, 1988) brought some cases to the fore where behavioral performance and the experiential level were mismatched. It is an interesting case of the separation of behavior and experience when no performance can be seen from the outside, yet involuntary performance appears in the experiences. This was the situation in 5.9% and 25% of the cases in Bowers 1988 and 1981 studies.

Zamansky and Clark (1986) prompted subjects to *resist* the administered suggestions, arguing that they are only words, there is no real physical force behind them that would, for instance, bend their arms. They found that despite the opposite instruction, the majority of the subjects (from all zones of hypnotic susceptibility) performed in accordance with the suggestion. Nevertheless, post-session interviews revealed that the oral report of the subjects about the way they had tried to conform to the suggestion (e.g., „my arm became weaker, then it bent”) was markedly different from their actual behavior (e.g., the arm did not bend at all) (Zamansky and Clark, 1986).

Mitchell and Lundy (1986) emphasized that all kinds of experiences may arise in hypnosis that are not separated. In their study, for example, induction forms built on (1) relaxation, (2) imagination, and (3) the combination of the two were compared; they found that their effects were not differentiated at the level of the behavioral scores of hypnotizability, but they did appear differently at the level of subjective experiences.

Similar conclusions were arrived at by Matthews and colleagues (Matthews, Bennett, et al., 1985; Matthews and Moser, 1988) in their study on the comparison between *indirect* and *direct* suggestion styles: The effects of the two styles of induction were different subjectively, but no behavioral difference could be seen.

Register and Kihlstrom (1986) pointed out that *hypnotic virtuosos* cannot be selected purely on the basis of behavioral scores, only if subjective experiences are also taken into consideration. Analyzing the subjective comments of subjects scoring high on HGSHS:A, the authors found that none of the arising dimensions could differentiate between “virtuosos” (scoring between 11-12 on the subsequently administered SHSS:C) and others (scoring between 0-10 on SHSS:C). The two groups did not differ in their scores on Field’s *Inventory Scale of Hypnotic Depth* or on Tellegen’s *Absorption Scale*, either.

² The present summary is based on Varga (1991).

In hypnotic anesthesia, there is no pain experience according to the verbal reports, but pain is present according to the physiological indices (e.g., in the GSR) (Sutcliffe is cited by Hilgard, 1968). The so called *hidden observer technique* developed by Hilgard (1976, 1977a, 1977b) implies a similar phenomenon; the technique reveals that the subjects experience pain in its full intensity at one level of consciousness despite the complete absence of its overt sign as a result of hypnotic analgesia (apart from the signals of the “hidden observer, of course).

Sheehan and McConkey (1982) and Sheehan (1986) reported that some of the subjects exhibiting *posthypnotic amnesia* could remember their own behavior when looking at the video-playback of their hypnosis sessions, but could not remember their subjective experiences. This had never been seen in simulators. The conclusion of the two studies is that the divergence of behavioral and experiential data is an essential feature of hypnosis, and it cannot be explained by social pressure or compliance: This finding “suggests an important distinction pertinent to the relationship between behavioral performance and experiential involvement in hypnosis” (Sheehan and McConkey, 1982, p. 198).

It would probably be possible to list other cases of divergence between the behavioral and experiential levels of hypnosis, but the hitherto cited research data already show that we have two different dimensions of hypnosis here – behavioral and experiential levels –, and that neither of them is “the only essence” of hypnosis, rather, it is the divergence as a phenomenon itself that is interesting.

We must see that in these cases it is incorrect to place either side (behavior or subjective experience) over the other and to consider it as the only reliable index. What we must understand is that the divergence of the objective and subjective features is the phenomenon itself, that has to be studied and investigated (this view is held by, e.g., Beahrs, 1986; Diamond, 1987).

“That a sophisticated subject can actually perform complex purposeful actions but experience only their end result as if it ‘just happened’ is the fundamental datum of hypnosis that is waiting to be explained. This *separation* of action from experience is what makes hypnosis seem so remarkable” (Beahrs, 1986, p. 468, emphasis added).

Although none of the analyses of the reviewed research talked about it, this general finding may originate in the fact that the experiential side of hypnosis (the direct aim of these studies) and the behavioral level of hypnosis (indicated by the degree of hypnotizability to be predicted) are two independent variables. As a further criticism: None of the studies treated the relational dimension as an independent, determinative, or at least moderating variable.

9.2. THE RELATIONSHIP BETWEEN THE BEHAVIORAL AND THE EXPERIENTIAL ASPECTS OF HYPNOSIS

It follows from the aforesaid that it is worth examining the relationship between the behavioral and the experiential aspects of hypnosis. Do we find experiences that are unusual in our everyday lives in only those who react to hypnosis in a behaviorally dramatic way? In order to answer this question, the experiences had to be revealed by methods that were

independent of the behavioral scales (i.e., that were not validated by them – despite Hilgard’s admonition), let them be free reports or experiences measured by paper-and-pencil tests.

9.2.1. Content Analysis of Free Reports of Experiences

There have been several opportunities in the experimental material of our Laboratory to compare the objective (behavioral) hypnotic susceptibility scores and the experiences reported about the very same hypnotic session.

In one of the studies (the so called MIA series; for details see in Appendix II), healthy volunteers (N=30) participated in two sessions: In one of the sessions, a male hypnotist conducted the experiment in accordance with the protocol of SHSS:B (Weitzenhoffer and Hilgard, 1959; in Hungarian: Greguss, Bányai, et al., 1975); in the other session, the tape-recorded scale of HGSHS:A adapted to a single person was played back to the subjects (without the subjects knowing that it was a recording: The subjects could think the hypnotist spoke to them through the speakers from the other room). Under these conditions, the subjects had a hypnotic susceptibility score as measured by the hypnotist (live situation), and a score based on the evaluation of an observer watching through a detective window (tape-recording situation; the evaluations were in accordance with the usual criteria of HGSHS:A).

Table 9.2. Codes, definitions, and components of combined categories used in the content analysis of subjective reports

| |
|---|
| ASC YES: Experiences indicating alterations of consciousness (without experiences regarding control processes) |
| Components: trance logic; perceptual distortions; vivid perceptions; amnesia or hypermnnesia; spontaneous age regression; perception of the alteration of consciousness; finds state similar to other altered states of consciousness; esteems level of his/her awareness as more dull or dizzy; subjective estimation of hypnosis at least moderate or deep; experiences deep bodily relaxation; vegetative/bodily experiences; distorted body perception; alteration of sense of ego; experience of dissociation of levels of consciousness; suggestions are effective and vivid; experience of following the suggestions; experience of concentrated attention |
| ASC YES / Control NO: Experiences indicating alterations of consciousness with experience of giving up control |
| Components: in addition to the above ASC YES, experiences referring to giving up or handing over general, recording, and volitional control to hypnotist; experiences giving up general reality testing and distortions of sense of time and sense of space |
| ASC NO: Experiences referring to lack of alterations of consciousness – that is, experiences referring to preserved waking consciousness (without referring to control processes) |
| Components: wandering attention; logical thinking; state reported to be similar to waking or as non-sleeplike and non-hypnotic like; non similar to other altered states of consciousness; level of alertness similar to normal, usual levels; muscle tone normal, usual; sense of self and body as normal and usual; experience of resistance to suggestions |
| ASC NO / Control YES: Experiences referring to lack of alterations of consciousness and preserved control functions |
| Components: in addition to the above ASC NO, experiences referring to the preservation of general, recording, and volitional control; experiences referring to usual general reality testing, time perception, and space perception |

The subjects reported their experiences in a slightly modified response booklet of the HGSHS:A. The instructions to report subjective experiences freely were more encouraging than usual.

In another study, after the standard procedure of HGSHS:A, the part of the response booklet that referred to the general experiences was used. The free reports written here were content analyzed.

The free reports were analyzed by three independent coders, using the coding system shown in Appendices III. and IV. The combined categories shown in Table 9.2 were used in the statistical analyses:

The combined reliability values of the coders was $r=.82$ (calculated by the formula in Holsti, 1969). The frequency-values of the different categories were modified in accordance with the relative frequency values based on the length of the text (following the procedure by Gottschalk, Lolas, and Vinney, 1986).

The results of the content analysis are shown in Appendix V. It is striking that the behavioral and the experiential data do not show a close correlation (see the correlational values in the case of MIA), and that there are no significant differences among the different zones of hypnotic susceptibility.

It is a fascinating aspect of these results that, accordingly, low susceptibles may also have experiences that are usually thought to be associated with altered states of consciousness. Let's see a few quotations to support this conclusion. Each quotation is from the reports of subjects who score low on the behavioral hypnotic susceptibility scales:

“... There is a part that is completely missing... I want to see this section, because I do not remember at all what X (the hypnotist) said in this part...”

“... I could not feel if I had a body”

“... It was as if I had lost my time-sense... The whole thing seemed to last for twenty minutes... I don't know... Now I can see that it was a whole hour...”

Regarding the “Hand lowering” suggestion: “A five-kilo weight... The one that has a ring on it... It hang from my wrist on a wire... But it did not hurt at all... and I could see the weight on my hands, but the ring lay horizontally on the weight...”

In addition to the statistical data, these examples (indicating spontaneous amnesia, bodily and time distortions, and trance logic) demonstrate that experiences characteristic of altered states of consciousness (Ludwig, 1966; Meadow, 1979; Oxman, Rosenberg et al., 1988; Pekala, Steinberg, and Kumar, 1986; Tart, 1986) are not at all restricted to persons with high hypnotic susceptibility.

9.2.2. Experiences Assessed by Tests

In order to estimate the relationship between subjective experiences as measured by tests and hypnotic susceptibility, every experiment in the data base of our Laboratory was examined where Archaic Involvement Measure (AIM), Phenomenology of Consciousness

Inventory (PCI), or the Dyadic Interactional Harmony questionnaire (DIH) were administered, and the subjects' hypnotic susceptibility score was also available (see more details on these methods in Chapter 10).

The database involved the material two group hypnosis studies and three experiments with individual hypnosis sessions. In all cases, the subjects were healthy volunteers.

- 1.) The HGSHS sub-sample constituted the data of group hypnosis sessions where the standard protocol of HGSHS:A was followed, but the AIM and the PCI were also administered at the end of the sessions (N=378, 164 males, 214 females, average age 25.43±2.01 years, age range 19 to 26).
- 2.) In the other group hypnosis sub-sample, the Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (WSGC) was administered within the frames of a psychogenetics research (for greater details see Szekely et al., 2010) (N=140, 38 males, 102 females, average age 23.96±4.66 years).
- 3.) In one of the individual situations, the SHSS:A was administered (N=278, 88 males, 190 females, average age 35,11±14,87 years).
- 4.) Data of tests measuring experiences from two other series of experiments with individual hypnosis sessions were available to us (2nd and 3rd rounds of SZIA, and Hangol-6; for details see Appendix II).

DIH was usually used in individual studies (since it focuses on the “dyad”). Nevertheless, it can be used even with reference to group hypnosis sessions, especially on the part of the subjects. Of the above group situations, DIH was administered after WSGC, but only to the subjects.

The results are shown in Tables 9.3, 9.4, 9.5, and 9.6, summarizing the data of AIM, PCI, DIH and hypnotic susceptibility.

Table 9.3. Correlations between Archaic Involvement Measure (AIM) and hypnotic susceptibility scores (data of subjects). SHSS:C refers to the experimental series Hangol-6 (see Appendices II and II/b), and the tests were filled out with reference to the whole experimental session

| | Group Sessions | | Individual Sessions | | |
|------------------------------------|------------------------|-----------------|-----------------------|----------------------------|---------------------------------|
| | HGSHS: A (n=378) | WSGC (n=140) | SHSS: A (n=275) | SHSS:C (SZIA) (n=47) | SHSS:C+ (HANGOL-6) (n=40) |
| AIM+ | 0.48** | 0.57** | 0.41** | 0.35* | 0.09 |
| AIM- | -0.04 | 0.13 | 0.06 | 0.00 | 0.15 |
| <i>Admiration and attachment</i> | 0.47** | 0.61** | 0.45** | 0.58** | 0.14 |
| <i>Fear of negative evaluation</i> | 0.30** | 0.28** | 0.16** | -0.15 | 0.07 |
| <i>Dependence need</i> | 0.41** | 0.52** | 0.33** | 0.14 | -0.06 |

SHSS:C: Stanford Hypnotic Susceptibility Scale, Form C, Weitzenhoffer and Hilgard, 1962.

WSGC: Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (Bowers, 1998).

** p<.01; * p<.05.

Table 9.4. Correlations between main and subdimensions of PCI and hypnotic susceptibility in four databases (p<.01; * p<.05). SHSS:C+ refers to experimental series Hangol-6, where several other events took place after the test suggestions of SHSS:C (see Appendices II and II/b), and the test were filled out with reference to the whole experimental session. In the 3rd round of the SZIA experiment, only data of the real subjects were processed (simulators were omitted)**

| PCI main and subdimensions | Group Sessions | | Individual Sessions | | | PCI main and subdimensions | Group Sessions | | Individual Sessions | | |
|----------------------------|------------------|--------------|---------------------|-----------------------------------|----------------------------|----------------------------|-----------------|--------------|---------------------|-----------------------------------|---------------------------|
| | HGSHS :A (n=370) | WSGC (n=136) | SHSS: A (n=261) | SZIA 3 rd round (n=24) | SHSS:C+ (HANGO L-6) (n=40) | | HGSHS:A (n=370) | WSGC (n=136) | SHSS:A (n=261) | SZIA 3 rd round (n=24) | SHSS:C+ (HANGOL-6) (n=40) |
| <i>Altered Experience</i> | 0.46** | 0.60** | 0.40** | 0.64** | 0.70** | <i>Attention</i> | 0.24** | 0.32** | 0.19** | 0.14 | 0.35* |
| Body image | 0.40** | 0.54** | 0.33** | 0.65** | 0.62** | Direction | 0.22** | 0.31** | 0.14* | 0.06 | 0.28 |
| Time sense | 0.35** | 0.47** | 0.34** | 0.27 | 0.52** | Concentration | 0.18** | 0.21* | 0.17** | 0.21 | 0.32* |
| Perception | 0.32** | 0.48** | 0.32** | 0.57** | 0.70** | <i>Imagery</i> | 0.13* | 0.50** | 0.21** | 0.28 | 0.35** |
| Unusual Meaning | 0.38** | 0.52** | 0.24** | 0.40 | 0.60** | Amount | 0.09 | 0.45** | 0.20** | 0.23 | 0.38** |
| <i>Positive Affect</i> | 0.35** | 0.45** | 0.26** | 0.18 | 0.37* | Vividness | 0.13* | 0.46** | 0.16** | 0.29 | 0.27 |
| Joy | 0.34** | 0.40** | 0.26** | 0.26 | 0.44** | <i>Self Awareness</i> | -0.37** | -0.46** | -0.41** | -0.41* | -0.50** |
| Sexual Excitement | 0.13* | 0.14 | 0.03 | 0.02 | -0.11 | <i>Altered Awareness</i> | 0.41** | 0.51** | 0.40** | 0.42* | 0.60** |
| Love | 0.31** | 0.37** | 0.22** | 0.16 | 0.40 | <i>Arousal</i> | -0.20** | -0.13 | -0.06 | 0.00 | -0.22 |
| <i>Negative Affect</i> | 0.00 | 0.25* | 0.09 | -0.02 | 0.08 | <i>Rationality</i> | -0.27** | -0.37** | -0.35** | 0.11 | -0.29 |
| Anger | -0.00 | 0.02 | 0.02 | -0.02 | 0.07 | <i>Volitional Control</i> | -0.30** | -0.54** | -0.37** | -0.18 | -0.21 |
| Sadness | -0.00 | 0.26* | 0.09 | -0.08 | 0.07 | <i>Memory</i> | -0.24** | -0.14 | -0.28** | 0.00 | 0.09 |
| Fear | 0.102 | 0.18* | 0.05 | 0.06 | 0.04 | <i>Internal Dialogue</i> | -0.08 | -0.03 | -0.05 | -0.30 | 0.00 |

HGSHS:A: Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor and Orne, 1962

SHSS:A: Stanford Hypnotic Susceptibility Scale, Form A, Weitzenhoffer and Hilgard, 1959

SHSS:C: Stanford Hypnotic Susceptibility Scale, Form C, Weitzenhoffer and Hilgard, 1962

WSGC: Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (Bowers, 1998)

** p<.01; * p<.05

Table 9.5. Correlations between factor based scales of PCI and hypnotic susceptibility in four databases (p<.01; * p<.05). SHSS:C+ refers to experimental series Hangol-6, where several other events took place after the test suggestions of SHSS:C (see Appendices II and II/b), and the test were filled out with reference to the whole experimental session. In the 3rd round of the SZIA experiment, only data of the real subjects were processed (simulators were omitted)**

| PCI factor based scales | Group Sessions | | Individual Sessions | | |
|---------------------------------|------------------|--------------|---------------------|-----------------------------------|---------------------------|
| | HGSHS: A (n=370) | WSGC (n=136) | SHSS: A (n=261) | SZIA 3 rd round (n=24) | SHSS:C+ (HANGOL-6) (n=40) |
| Dissociative control | 0.46** | 0.60** | -0.04 | -0.16 | 0.57** |
| Positive affect | 0.41** | 0.53** | -0.03 | -0.19 | 0.52** |
| Negative affect | 0.03 | 0.20* | 0.06 | -0.02 | 0.05 |
| Visual imagery | 0.14* | 0.49** | -0.04 | 0.29 | 0.33* |
| Attention to internal processes | 0.36** | 0.53** | -0.11 | -0.28 | 0.63** |

HGSHS:A: Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor and Orne, 1962

SHSS:A: Stanford Hypnotic Susceptibility Scale, Form A, Weitzenhoffer and Hilgard, 1959

SHSS:C: Stanford Hypnotic Susceptibility Scale, Form C, Weitzenhoffer and Hilgard, 1962

WSGC: Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (Bowers, 1998)

** p<.01; * p<.05

Table 9.6. Correlations between subjects' scores on DIH subscales and hypnotic susceptibility. SHSS:C+ refers to experimental series Hangol-6, where several other events took place after the test suggestions of SHSS:C (see Appendices II and II/b), and the test were filled out with reference to the whole experimental session

| DIH (subjects) | SHSS:A (n=276) | SHSS:C (SZIA) (n=47) | SHSS:C+ (HANGOL-6) (n=40) | WSGC (n=136) |
|----------------|----------------|----------------------|---------------------------|--------------|
| Intimacy | 0.23** | 0.33* | 0.52** | 0.36** |
| Communion | 0.16** | 0.37** | 0.37* | 0.22* |
| Playfulness | 0.25** | 0.38** | 0.37* | 0.24** |
| Tension | -0.10 | -0.25 | -0.22 | -0.20* |

SHSS:A: Stanford Hypnotic Susceptibility Scale, Form A, Weitzenhoffer and Hilgard, 1959

SHSS:C: Stanford Hypnotic Susceptibility Scale, Form C, Weitzenhoffer and Hilgard, 1962

WSGC: Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (Bowers, 1998)

** p<.01; * p<.05

9.3. DISCUSSION

As a summary, we can say we have found no strong and systematic linear relationship between the scores reflecting behavioral reaction to hypnosis and the subjective indicators, regardless of the method (content analysis of free reports or questionnaires) of securing the experiential data. Even PCI, the test that taps the phenomenological aspects of the alteration of consciousness in several areas (e.g., positive and negative emotions, attention, several

indices of visual imagery) proved to be independent of or only loosely correlated with hypnotizability. The main dimension of “Modified experience” was the only one that really showed a systematic high correlation with the hypnotic susceptibility of the subjects (the more complex and difficult the experimental situation, the better). In two of the individual situations (SHSS:A, 3rd round of SZIA), the higher correlations occasionally present in the primary and secondary dimensions of PCI practically disappeared in the factor-based scales of PCI, while in one (Hangol-6) they did not.

It is noteworthy that the correlation between the indices of experiences and the hypnotizability scores changed significantly, depending on the individual or group nature of the situation, and on the content of the given experiment. Interestingly, the correlations were higher in the group situations. This was true even in the case of archaic involvement (AIM), even though this test directly names the hypnotist as a person (e.g., “The hypnotist felt very powerful to me”). Evidently, in a group situation, everybody “shares” (is forced to share) in the attention, care, technical preparation, etc. of the hypnotist. Nevertheless, our data show that the theoretically expected relationship between hypnotic susceptibility and archaic feelings appear more consistently in a group situation than in the individual sessions.

In the cases of DIH, there are only moderate to low correlations with behavioral hypnotic susceptibility scores. This indicates that the subjective experience of the interaction, and especially the evaluation of the interaction can be relatively independent of the behavioral performance of hypnosis; at least there is no linear relationship between these indices. In sum: The behavioral reaction may be quite independent of the experience as the person evaluates the hypnotic interaction from a relational aspect.

As a summary, we can say that the correlation between data secured by the content analysis of the free reports or by the test scores measuring the experiences and the hypnotic susceptibility of the subjects are far from being high or consistent. The relationship between two variables seems to be of various extent and nature in the various experimental series. Thus, our data are in line with the findings regarding the experiences in hypnosis and shown in the first part of this chapter.

Our data are also in line with the findings of Pekala and Kumar (2000), where they differentiated 9 subtypes within the whole range of hypnotizability by cluster analysis, if they also considered the phenomenological characteristics related to hypnosis. In other words, the phenomenon of hypnosis is much more variegated than the hypnotic susceptibility score based on behavioral performance (and than the derived susceptibility ranges). The same behavioral score (even the range of “low” susceptibility) may be accompanied by many different patterns of experiences.

We can say in light of our data that a high behavioral score does not guarantee the presence of the majority of hypnosis-related experiences, and vice versa, a low behavioral score does not mean that the person may have no profound experiences in a hypnotic situation, let them imply an altered state of consciousness, show the revival of archaic relational patterns, or reflect the intimacy and harmony of the present relationship.

DEVELOPMENT OF INSTRUMENTATION

By demonstrating that even experimenter hypnotists have rich and important phenomenological data, we had to develop appropriate methodologies for recording phenomenological data in interactional approach. We wanted to enrich the research arsenal by methods that are suitable for both the subjects and for the hypnotists, that are not specific to hypnosis (i.e., they can be used in other situations and interactions, too), and most of all, that are free from the expectation that changes in subjective experiences characterize only the highly hypnotizables.

10.1. PARALLEL EXPERIENTIAL ANALYSIS TECHNIQUE (PEAT)

Sheehan and his colleagues (Sheehan, McConkey, and Cross, 1978; Sheehan and McConkey, 1982; Sheehan, 1982–83, Sheehan, 1991) developed the Experiential Analysis Technique (EAT) for gathering data on hypnotic subjects' phenomenological experiences. The essence of this technique is that the report of a hypnotic subject on his/her subjective feelings and thoughts is stimulated by the video-playback of the original hypnosis session. In this situation, an independent inquirer listens to the subjects' reports (for details of the original procedure see Sheehan and McConkey, 1982). On the basis of the experiences regarding the individual test suggestions, the developers described special cognitive styles. Some of the subjects interpreted the suggestions verbatim (this is the passive, so called *concentrative* style), others created their experiences freely, independently of the suggestions (this is the so called *constructive* style). It was also demonstrated that these processing styles may vary within an individual from one suggestion to the next.

Our interactional approach required to extend this procedure to the hypnotist. The new method, called Parallel Experiential Analysis Technique (PEAT) has been described in detail in Varga, Bányai, and Gósi-Greguss (1994). Its essence is that both the subject and the hypnotist watch the video-playback independently of each other, and report their experiences freely.

Later, as a further development of the basic method (EAT), Whitehead (1996) used a version in which the subject and the hypnotist watch the recording of the hypnosis session together.

BOX 14. ILLUSTRATION OF STEPS OF PARALLEL EXPERIENTIAL ANALYSIS TECHNIQUE



1. Subject waiting for the beginning of the experiment



2. The hypnotist arrives



3. Rapport formation



4. Administration of test suggestions



5. Inquirer of PEAT arrives after the hypnosis session



6. Inquirer instructs the subject



7. Basis of experiential report: video recording of original hypnosis session



8. The hypnotist gives a subjective report to an independent inquirer simultaneously with the subject



9. The experiential report is also recorded on video



10. Video record of the experiential report of the hypnotist



11. The subject fills out questionnaires after the experiential report.



12. The hypnotist fills out questionnaires after the experiential report.

Here we restrict ourselves to the most important methodological points concerning PEAT and to some of the preliminary results that later proved to be relevant (see Figure 10.1.).

Video Picture

In the interactional modification of EAT, it is important to use a video recording of the hypnosis session where both of the participants can be seen. Although we did not compare

this kind of picture systematically to a recording where only the subject is seen, we got the impression that the “dyadic” picture elicited more comments on the partner. Unfortunately, even the most comprehensive report on EAT (Sheehan and McConkey, 1982) failed to mention who was (or were) seen in the video picture used (subject alone or together with the hypnotist).

Inquirers

The best method is to use two inquirers interviewing the subject and the hypnotist simultaneously but separately, immediately after the session: In this case, both subject and hypnotist can give fresh and spontaneous remarks. It would be very tiring for one inquirer to listen to the reports of both subject and hypnotist one after the other, and a single inquirer may mediate between the two reports, biasing the second by losing his/her independence.

The problem arises however, that the difference in the two separate inquirers' styles and personalities may have various influences on the reports. Hence, we analyzed the effect of different inquirers. Our results showed that only one thematic category was influenced (the male inquirer elicited more negative statements than the female), but this effect was observed only in the case of subjects. Nevertheless, it is advisable to work with inquirers who share as many characteristics (age, gender, hypnotic susceptibility, and so on) as it is possible, in order to reduce the possibility of such differences.

Parting of the Participants of the Hypnotic Interaction

After the hypnosis session, the hypnotist briefly described the importance of the recording of the subjective experiences, and explained that the subject would be interviewed by an independent person, whom s/he introduced by telling his/her name and affiliation, and left the subject alone in the experimental chamber. The whole “parting ceremony” between the hypnotist and subject was standardized (see the text of this in Appendix VI/a). When the independent inquirer entered to interview the subject, the same procedure and instructions were applied as those used by the original EAT method (see Sheehan and McConkey, 1982, and Appendix VI/b).

We think that the most important methodological point researchers using PEAT have to consider is the parting of the hypnotist and the subject at the end of their hypnosis interaction. This parting leads both of them to a situation where they are supposed to give honest and deep reports on their feelings. Apart from clinical evidence, experimental research (Bányai, 1991) also shows that very strong emotional bonds may develop between hypnotist and subject, sometimes reaching the deep archaic layers of their personality. Tearing them away from this relationship and asking them to report on the hypnosis session is a problematic point, even in the original form of EAT (where only the subjects are involved). Thus, it is crucial that before parting, the hypnotist should put trust into the inquirer, and should briefly explain the scientific importance of the independent way of discussing subjective feelings.

Furthermore, this problem is connected to the hypnotizability of the subjects as well: The higher the hypnotic susceptibility of the subject, the stronger the observable bond to the

hypnotist (Nash and Spinler, 1989); consequently, parting with the hypnotist immediately before the (P)EAT session doesn't have equal effects on subjects of different hypnotizability.

The Hypnotist's Report

It is equally, if not more important to make every effort to help the hypnotists, too, to give a detailed report about their experiences. In our experiments, the PEAT session with the hypnotists took place in a very similar experimental chamber as the hypnosis session or the PEAT session with the subjects. It is of vital importance to give an encouraging instruction to the hypnotists as well. It is important to train the inquirer to acquire the appropriate attitude, namely, helping the hypnotist to change his/her role and creating an atmosphere where self-disclosure can take place. In our experiments, the hypnotists during PEAT occasionally turned to very intimate, ego-involved topics, and sometimes the report was given in a high emotional tone. It may be difficult for the inquirers to handle these situations: to be empathic, but not deeply involved, and to remain within the strict experimental conditions determined for them by this method.

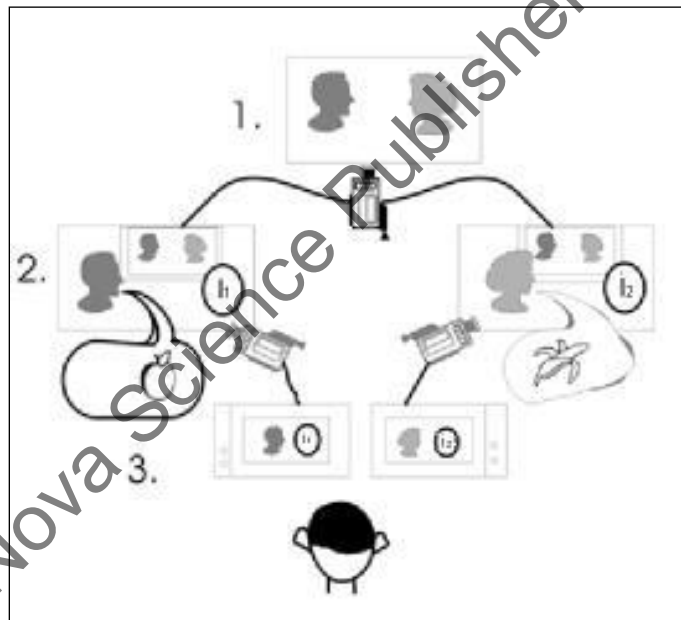


Figure 10.1. Steps of comparing the independent reports of PEAT

1. Original hypnosis interaction, recorded.
2. Reports of hypnotist and subject separately, in the presence of independent inquirers (I_1 and I_2), stimulated by the video recordings taken in step 1.
3. Data analysis: comparing the independent reports by viewing it simultaneously on two monitors. The rater may look for thematic concordances, or judge the degree of harmony between the reports.

Data Analysis

The subjective experiences related by the subjects and by the hypnotists were *content analyzed* separately. A category system (of about 90 categories) covering the topics and features of the reports was developed to analyze the experiences (see Appendix III).

One can follow several ways when comparing the independent reports of subject and hypnotist:

- Actual thematic concordances can be looked for;
- Independent raters can judge the degree of harmony between the reports;
- Temporal changes of the dynamics of the concordances in the independent reports can be followed;
- By intercorrelating the frequency of the appearance of specific thematic categories, the hypnotic interaction can be characterized in general.

With the help of PEAT, one can even utilize the opportunity that a video recording offers an objective time measure on the basis of which slight temporal changes can be followed; this way, we can describe the dynamics of the interactional process, and discrepancies or concordances can be discovered in the timing of comparable features in the two participants' experiences.

10.1.1. Interactional Analyses Using the Material from PEAT

The following three sections (A, B, C) will illustrate the interactional nature of PEAT by demonstrating some connections between the subjective reports of the subjects and those of the hypnotists.

A.) Thematic concordances

In the course of analyzing our records, we realized that if we follow the video recordings of the two reports simultaneously (for instance, on two monitors) we can detect characteristic changes in the degree of harmony between them. In some parts, the hypnotist's and the subject's reports conflicted with each other, but there were points where the independent reports were highly concordant. In these latter cases, for example, the two people commented the events the same way, they sometimes used the same expressions or metaphors describing their feelings and experiences, the color tone of their imagery scenes was the same, and so on. The agreement between the reports was sometimes striking.

Some verbatim quotations exemplify these concordances:

- a) In commenting the same part of the session, the *subject* said: "I felt that I was in a very deep hypnosis", while the *hypnotist* said: "I felt that he was in a deep trance".
- b) *Subject*: "at the end, it would have been good to stay and continue...",
Hypnotist: "I felt that he would like to go on enjoying this hypnosis".

c) *Subject*: “At this point, there was something like sunshine, with a beautiful calm feeling”, *Hypnotist*: “At the moment, a nice warm feeling spread over my body”.

It is important to underline that these points of concordance cannot be attributed to the observation of obvious behavioral features (e.g., smiling). As in PEAT the participants of the hypnosis interaction relate their experiences and feelings, and comment on the events of the hypnotic session completely independent of each other, it is very interesting to find that these independent reports still match each other. We postulated that in most of the cases the points of concordance indicate a deep attunement between the hypnotist and subject, where they have common subjective feelings and associations, and their reports indicate a very fine harmony of their experiences. This phenomenon can be considered as another sign or example of interactional synchrony, apart from those that were described at other levels of the investigation, for example, joint movements and posture mirroring at the overt behavioral level, or the common breathing rhythm and parallel myographic activity at the physiological level (Bányai, Mészáros, and Csókay, 1982, 1985; Bányai, 1985; Bányai, 1991).

B.) Hypnotists' working styles

According to our analysis of different levels of the hypnosis sessions, the nature of the hypnotists' relational and emotional involvement in hypnosis and their so called working styles were different. One of the hypnotists (see Appendix II. Experiment EAT, Series 1) relied mainly on her physical feelings, while the hypnotist in the second series remained at a more analytic, cognitive level, using his cognition instead of his body. These styles were labeled as “physical-organic” and “analytic-cognitive” styles, respectively.

This analysis was one of the first studies where the various working styles of the hypnotists were described. A detailed description and operationalization of hypnosis styles were published subsequently (for a detailed description of these styles, see Bányai, Gósi-Greguss, Vágó, Varga, and Horváth, 1990; Bányai, 1991; Bányai, 1998; Bányai, 2002; Varga, Bányai, Józsa, and Gósi-Greguss, 2008).

Analysis of the subjects' verbal reports given through the PEAT showed that the degree of the subjects' “positive relational experiences” is closely connected to these different styles. In the 1st series, the “positive relational” category in the subjects' reports showed tendency of positive correlation with an interactionally synchronous physical phenomenon, with the amount of the so called “common breathing rhythm and pulsation” ($r=.53$, $p<.10$), that is, with the time ratio of the matching of breathing rhythm of the hypnotist and subject during the hypnosis session. This connection was even stronger with low hypnotizable subjects ($r=.96$, $p<.05$).

In the 2nd series, however, the same category in the subjects' reports – referring to their “positive relationship” with the hypnotist – was closely connected to those contents of the hypnotist's reports which indicated his cognitive style: (1) the “amount of interpretation” ($r=.75$, $p<.01$), (2) the “comments on his strategy in hypnosis” ($r=.65$, $p<.05$), and (3) the “professional statements” ($r=.60$, $p<.05$) categories.

C.) Intercorrelations

The intercorrelation of the categories of hypnotists' and the subjects' subjective experiences showed the following: In the 1st series, the frequency of the subjects'

reports on their “positive relationship with the hypnotist” correlated positively with the hypnotists’ “positive emotional-relational involvement” ($r=.68$, $p<.02$), with the “total number of positive comments” of the hypnotist ($r=.81$, $p<.01$), and with the “general good feelings” of the hypnotist ($r=.63$, $p<.05$). In sharp contrast with these correlations, none of these categories of the hypnotist of 2nd series correlated significantly with the subjects’ above mentioned category. So, the intercorrelation of the participants’ subjective experiences showed very different patterns in the two series.

10.2. THE DYADIC VERSION OF THE ARCHAIC INVOLVEMENT MEASURE (AIM)

In order to measure archaic involvement introduced by Shor (1962), Nash and Spinler (1989) developed a paper-and-pencil test, using the interview material in which subjects reported on the experiences they had had under hypnosis. They formulated 20 items which are evaluated by the respondents on a seven-level Likert-type scale, indicating how much the subject felt the given experience under hypnosis. According to the analysis of the original authors, using the answers of 452 respondents, the scale, which is psychometrically correct, has 19 items and has appropriate reliability coefficients (standardize alpha reliability: .94, see Appendix VII).

The original authors’ analysis revealed three factors:

- 1.) *Perceived power of the hypnotist* (item numbers 3, 4, 9, 12, 13, 14),
- 2.) *Positive emotional bond to the hypnotist* (item numbers 1, 2, 5, 6, 7, 8, 11), and
- 3.) *Fear of negative appraisal* (item numbers 10, 15, 16, 17, 18, 19).

Scoring by factors is done by averaging the scores of the items in the given factor.

A version of AIM to be filled by the hypnotist was developed within the interactional framework of our studies (Bányai, Gósiné Greguss, Vágó, Varga, and Horváth, 1990), and three negatively charged items were added to both the original and the hypnotist versions (the original AIM included only positive archaic involvement items). Thus, the resulting questionnaire had 19 positive (AIM+) and three negative (AIM-) items, separately for the subjects and for the hypnotists (see Appendix VIII). The range of possible scores for the AIM+ and AIM- are 19-133 and 3-21, respectively.

The factor structure of AIM, based on the responses of 593 persons turned out to be slightly different from the that of the original authors (Nash and Spinler, 1989; Bányai, Varga, and Gósiné Greguss, 2001). The factors emerging in the Hungarian sample were:

- 1.) *Admiration and attachment toward the hypnotist* (item numbers 1, 3, 4, 5, 6, 7, 8, 9, 11, explained variance 27.61%),
- 2.) *Fear of negative evaluation* (item numbers 2, 10, 16, 17, 18, 19, explained variance 19.94%),
- 3.) *Dependence need* (item numbers 12, 13, 14, 15, explained variance 14.16%)

The Cronbach alpha values in the Hungarian sample were .93 and .91 in the group hypnosis situation and the individual sessions, respectively.

In the case of the hypnotists, the original items were re-phrased from the perspective of the hypnotist. For example, the item for the subjects “In a way, it was neat to share in the power of the hypnotist” was transformed for the hypnotists as “In a way, it was neat to share my power with the subject”.

The factor analysis of the questionnaire for the hypnotists was performed on the basis of 120 standard individual hypnosis sessions (SHSS:A) (Bányai, 2008; Tauszik, Bányai, Gősiné Greguss, Varga, and Székely, 2006), resulting in four factors:

- 1.) *Attachment and positive relationship* (item numbers 1, 2, 3, 4, 8, explained variance 20.30%),
- 2.) *Care and need of caring* (item numbers 6, 6, 7, 11, 13, explained variance 19.55%),
- 3.) *Fear of negative evaluation* (item numbers 10, 16, 17, 18, 19, explained variance 19.46%),
- 4.) *Need for control* (item numbers 9, 12, 14, 15, explained variance 16.27%)

10.3. FIVE-SCORE VERSION OF THE PHENOMENOLOGY OF CONSCIOUSNESS INVENTORY (PCI)

As we have seen (see Chapter 9), the Phenomenology of Consciousness Inventory (PCI, see Appendix IX) is a paper-and pencil test with 53 items, measuring the subjective alteration of consciousness on 26 dimensions (PCI, Pekala, 1980, 1982, 1991ab; Pekala, Steinberg and Kumar, 1986): Altered Experience (Body image, Time sense, Perception, Meaning), Positive Affect (Joy, Sexual Excitement, Love), Negative Affect (Anger, Sadness, Fear), Attention (Direction, Concentration), Imagery (Amount, Vividness), Self Awareness, Altered Awareness, Arousal, Rationality, Volitional Control, Memory, Internal Dialogue . PCI is suitable to map phenomenological states by having subjects complete it in reference to a preceding stimulus condition. The Hungarian version was validated by Szabó (1989; see also Szabó, 1993). The reliability measures of PCI applied in individual standard hypnosis sessions in our studies are very good (see Appendix VII).

The PCI have been used in a wide variety of stimulus conditions, such as progressive relaxation and deep abdominal breathing (Pekala and Forbes, 1988), out-of-the-body experience (Maitz and Pekala, 1991), drumming and trance postures (Maurer, Kumar, Pekala, and Woodside, 1997; Woodside, Kumar, and Pekala, 1997), firewalking (Pekala and Ersek, 1992–93), eyes open and closed sitting quietly, (for a review see Pekala et al., 2010). The validity of the method with reference to hypnotically altered states of consciousness was confirmed in several studies.

As our earlier data (Varga et al., 1993, 1995, 1999, 2004) proved that experimenter hypnotists' free reports contain many details regarding their own alteration of consciousness, PCI seemed to be a good paper and pencil test to tap this aspect. Therefore, we administered the PCI to the hypnotists, too, asking them to complete the inventory by scoring their own feelings and experiences, in reference to the preceding “hypnotizing” period.

Originally, PCI had no final score; it gives 26 scores on the above mentioned scales and subscales. This makes it difficult to use it in relation to other measures. The difficulty is even greater in the interactional approach, where the scores of both participants are taken into consideration.

Kumar, Pekala, and Cummings (1996) reported a five factor scoring method of PCI, where only five scores characterize the phenomenological state of a person. In our study, we wanted to test via a confirmatory factor analysis (CFA) if the covariance matrix of phenomenological report during the entire SHSS:C administration in this study conforms (or fits) to that found in previous work (Kumar, Pekala, and Cummings, 1996).

Our results are consistent with those of Kumar, Pekala, and McCloskey (1999), in that the factors of Dissociative Control, Positive Affect, and Attention to Internal Processes were significantly correlated ($p < .001$) with the SHSS:C scores, even though there were methodological differences between the two studies. That is, these results hold whether the PCI was completed by the subjects in reference to a four-minute interval embedded in the hypnosis session (as in the original application of PCI), or when the PCI was completed in reference to the entire scale (as was done in our later study).

The confirmatory factor analysis on the Hungarian data revealed a reasonably good fit for the factor model found by Kumar, Pekala, and Cummings (1996). This fit suggests that the five-factor model of the PCI obtained earlier with the HGSHS:A might be productively extended to other scales (the SHSS:C), in a different linguistic and cultural setting (for further detail see Varga, Józsa, Bányai, Gósi-Greguss, and Kumar, 2001).

Hence, on the basis of these results, we included PCI to our research arsenal. Both for hypnotists and subjects we calculate five scores, as defined below:

- 1.) *Dissociative control*: Higher factor scores reflect alterations in (a) trance effects associated with altered states of awareness and altered experiences (Body Image, Time Sense, Perception, Visual Imagery, and Meaning) and (b) ego-executive functioning (Fromm, Brown, Hurt, Oberlander, Boxer, and Pfeifer, 1981) and reality orientation associated with decreases in memory, rationality, volitional control, and internal dialogue (i.e., the classic suggestion effect, Weitzenhoffer, 1978; Bowers, 1981, 1992). In an earlier study, Spinhoven, Vanderlinden, Ter Kuile, and Linssen (1993) found two factors – trance and reality orientation – with a shortened version of the PCI administered within the context of the Stanford Hypnotic Clinical Scale (Morgan and Hilgard, 1975). According to Kumar, Pekala, and Cummings (1996), the dissociated control factor combines Spinhoven et al.'s two factors into one factor.
- 2.) *Positive affect*: Higher factor scores reflect more Joy, more Sexual Excitement, more Love, Altered Meaning, Altered Body Image, and Altered Perception.
- 3.) *Negative affect*: Higher factor scores reflect more Anger, Sadness, Fear, and Arousal, but low Rationality.
- 4.) *Visual imagery*: Higher factor scores reflect more Visual Imagery (Amount and Vividness).
- 5.) *Attention to internal processes*: Higher scores reflect greater alterations in time sense and perception, greater absorption, inward directed attention, altered state of awareness, internal dialogue, and low imagery vividness.

10.4. DEVELOPMENT, STANDARDIZATION AND VALIDATION OF THE DYADIC INTERACTIONAL HARMONY (DIH) QUESTIONNAIRE

The next step in the formation of our interactional methodology was the development of a new paper-and-pencil test called the Dyadic Interactional Harmony (DIH) questionnaire (Varga, Józsa, Bányai, and Gósi-Greguss, 2006; see Appendix X). The most important characteristic of this measure is its direct focus on the interaction itself, evaluated by the participants of the *interaction* themselves.

The main motive for the development of this questionnaire was to get a measure that is a) short and simple; b) easily applicable for parallel processing of the data; c) not specific for hypnotic interactions; d) not restricted to experimental hypnosis sessions, but provides clinically meaningful data as well; e) suitable to characterize the degree and pattern of harmony between the interacting participants.

DIH lists 50 items: nouns and adjectives that are characteristic of various kinds of dyadic interactions. The interactants fill in the questionnaire independently of each other, indicating how much each feature characterized their recent interaction on a Likert-type scale, from 1 (not at all) to 5 (completely).

The Hungarian version of DIH was standardized in a sample of 256 subjects (Varga, Bányai, and Gósi-Greguss, 1999) who were interacting in pairs in a non-hypnotic setting, in a so called joint Rorschach test situation (for the test see Willi, 1969). In the joint Rorschach test situation the interacting partners should come to an agreement regarding the meaning of the ink-blot of the "classical" Rorschach-test. In our studies, this was used as a standard interactional situation, rather than a clinical diagnostic procedure (Urbán, Varga, and Józsa, 1998; Varga, Józsa, and Urbán, 2002).

The standardization DIH data of Joint Rorschach situation were factor analyzed, using iterated principle factor analysis with varimax rotation. Four factors were obtained, accounting for 72% of the common variance. On the basis of these factors, four subscales were created (3 positive and 1 negative), each having good internal consistency: 1. Intimacy (items like passion, love. Cronbach alpha: .85), 2. Communion (items like understanding, harmony. Cronbach alpha: .86), 3. Playfulness (items like humor, inspiring. Cronbach alpha: .81), 4. Tension (items like anxiety, fear. Cronbach alpha: .78). The cumulative explanatory values of these factors are: 42, 58, 66, and 72% respectively. Appendix XI shows the data of factor analysis of DIH.

Naturally, after standardization, DIH was also applied to hypnosis sessions. At first, data were collected in 232 subjects in standardized individual (E1: Stanford Hypnotic Susceptibility Scale, Form A, SHSS: A, Weitzenhoffer and Hilgard, 1959) and 110 subjects in standardized group hypnosis sessions (E2: standardized protocol of Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C, WSGC, Bowers, 1998), where other measures of hypnosis (e.g., hypnotic susceptibility, PCI) were applied to validate the DIH subscales on a hypnotic sample (see Appendix II, experiments SHSS:A and WSGC). In case of the individual sessions (E1) the measures were applied for the hypnotists (Hs) as well. The hypnotist (H) and the subject (S) completed the questionnaires independently.

The four subscales had good internal consistency in this hypnotic sample as well, as their Cronbach alpha values ranged from .77 to .92. (see also Appendix VII).

The subscales of DIH are not independent from each other (as can be seen in Table 10.1), as it was the case in the original standardization sample as well.

10.4.1. The Relationship between DIH and Other Measures of Hypnosis

Sections 10.2 and 10.3, and Tables 10.2. and 10.3. show the correlational coefficients of between the subscales of DIH and other variables (SHSS:A, WSGC, five factor scoring method of PCI).

Table 10.1. Correlations of DIH subscales (data of the subjects); ** p<.01

| | Intimacy | | | Communion | | | Playfulness | | |
|--------------------|------------|------------|---------------|------------|------------|---------------|-------------|------------|---------------|
| | E1 (N=231) | E2 (N=106) | E1+E2 (N=337) | E1 (N=231) | E2 (N=106) | E1+E2 (N=337) | E1 (N=231) | E2 (N=106) | E1+E2 (N=337) |
| Intimacy | 1 | | | | | | | | |
| Communion | 0.51** | 0.69** | 0.57** | 1 | | | | | |
| Playfulness | 0.59** | 0.65** | 0.62** | 0.53** | 0.63** | 0.59** | 1 | | |
| Tension | 0.03 | -0.28** | -0.06 | -0.29** | -0.41** | -0.31** | -0.17** | -0.43** | -0.25** |

* p < .05; ** p < .01.

Table 10.2. Correlations of the DIH subscales with SHSS:A and subscales of PCI in E1

| E1 | N | DIH Scores of the subject | | | | DIH Scores of the hypnotist | | | |
|----------|-----|---------------------------|-----------|-------------|---------|-----------------------------|-----------|-------------|---------|
| | | Intimacy | Communion | Playfulness | Tension | Intimacy | Communion | Playfulness | Tension |
| SHSS:A | 231 | 0.19* | 0.18** | 0.21** | -0.07 | 0.33** | 0.30** | 0.29** | -0.14* |
| PCI DC S | 228 | 0.21** | 0.01 | 0.21** | -0.00 | 0.17* | 0.15* | 0.16* | -0.00 |
| PCI PA S | 228 | 0.48** | 0.16* | 0.32** | 0.02 | 0.11 | 0.14* | 0.13* | 0.01 |
| PCI NA S | 228 | -0.02 | -0.19** | -0.10 | 0.50** | 0.14* | 0.06 | 0.01 | 0.02 |
| PCI VI S | 228 | 0.19** | 0.11 | 0.13* | -0.10 | 0.06 | 0.09 | 0.08 | 0.06 |
| PCI IA S | 228 | 0.14* | 0.11 | 0.21** | -0.00 | 0.09 | 0.13* | 0.13* | -0.04 |
| PCI DC H | 227 | 0.13 | 0.00 | 0.03 | 0.13 | 0.50** | 0.29** | 0.40** | 0.27** |
| PCI PA H | 227 | 0.11 | 0.00 | 0.01 | 0.05 | 0.82** | 0.46** | 0.62** | 0.12 |
| PCI NA H | 227 | -0.04 | -0.03 | -0.08 | 0.01 | 0.06 | -0.14* | -0.06 | 0.51** |
| PCI VI H | 227 | 0.14* | 0.05 | 0.06 | 0.00 | 0.14* | 0.21** | 0.17* | -0.01 |
| PCI IA H | 227 | 0.12 | -0.02 | 0.04 | 0.14* | 0.58** | 0.34** | 0.45** | 0.24** |

SHSS:A: Stanford Hypnotic Susceptibility Scale, Form A, Weitzenhoffer and Hilgard, 1959; PCI: Phenomenology of Consciousness Inventory, S: scores of the subject; H: scores of the hypnotist, DC: Dissociative control, PA: Positive affect, NA: Negative affect, VI: Visual imagery, IA: Attention to internal processes, * p < .05; ** p < .01.

Table 10.3. Correlations of the DIH subscales with WSGC and subscales of PCI in E2

| E2 (N=106) | DIH Scores of the subject | | | |
|------------|---------------------------|-----------|-------------|---------|
| | Intimacy | Communion | Playfulness | Tension |
| WSGC | 0.29** | 0.27** | 0.20* | -0.22* |
| PCI DC S | 0.41** | 0.29** | 0.26** | -0.09 |
| PCI PA S | 0.65** | 0.41** | 0.50** | -0.22* |
| PCI NA S | -0.15 | -0.27** | -0.30** | 0.63** |
| PCI VI S | 0.19* | 0.16 | 0.08 | -0.06 |
| PCI IA S | 0.19* | 0.16 | 0.08 | -0.06 |

S: scores of the subject; DC: Dissociative control, PA: Positive affect, NA: Negative affect, VI: Visual imagery, IA: Attention to internal processes, * $p < .05$; ** $p < .01$.

As can be seen in sections 10.2 and 10.3, and Tables 10.2. and 10.3., the correlations between the SHSS scores and the Intimacy, Communion, and Playfulness subscales of DIH are moderately positive, but significant. This means that the higher the hypnotic susceptibility, the better communication, greater intimacy and a more playful atmosphere the hypnotist and the subject experience. Furthermore, the hypnotists' scores on the above DIH scales showed a higher correlation with SHSS scores than those of the subjects; thus, the quality of the interaction as perceived by the hypnotists is more related to the subjects' hypnotizability scores than the DIH scores of the subjects themselves.

The subjects were categorized into three groups on the basis of their hypnotic susceptibility scores: 0–4 low hypnotic susceptibility, 5–8 medium hypnotic susceptibility, 9–12 high hypnotic susceptibility¹ There was a significant difference among the three groups of hypnotizability in all subscales, except Intimacy (see Table 10.4), as a function of hypnotic susceptibility: low susceptible subjects gave significantly lower values of Communion, Playfulness, and Tension than either medium or high susceptible persons. Regarding effect size, this difference was significant mainly in the Communion subscale.

10.4.2. The Hypnotic Interaction on the Basis of DIH

The average DIH scores of hypnotists and subjects were compared in 232 hypnotic interactions in E1. Table 10.5. shows the data from the comparisons of the situations of “to hypnotize” and “to be subject” in standardized hypnosis sessions.

As a summary we can say that the DIH questionnaire has good psychometrical features: There are very high internal reliability values for the subscales both in the original (Joint Rorschach sample) and in these hypnotic samples. The high correlation between the factors and subscales imply that basically “one thing” is measured by DIH, especially by the “Intimacy” subscale. This strongest factor has the highest explanatory value, but the three other subscales may also contain important information, occasionally showing different

¹ Analyzing the distribution of hypnotic susceptibility scores, in cases of E1 and E2, we found that we would get a more even distribution of N in the different ranges of hypnotizability. This is why we slightly deviated from the traditional boundaries (0-4 low, 5-7 medium, 8-12 high susceptibility) of the ranges.

relationships with the other variables than the strongest factor (details are shown later). The subjects in the individual sessions give higher scores on DIH, especially on the “Communion” scale, reflecting the fact that a dyadic situation is based more on the cooperation of the participants than the group session.

The analysis of the pattern of correlations between PCI (the validating criteria) and DIH, we can characterize the relationship between the subjective alteration of consciousness as reported by the participants on PCI, and the way they characterized their interaction on DIH. The positive affects reported by the participants on PCI is strongly correlated with the way the interactants characterize the interaction itself (positive DIH scales), which is true both in the case of the subjects and the hypnotists. In case of the subjects, the positive subscales of DIH are moderately connected with the positive affect scale of PCI, but all the other PCI scales are almost independent from the DIH scores (significant, but close to zero correlations). That is, the phenomenological level of the subjects (PCI) seems to be almost entirely independent of the way they evaluate the interaction itself (DIH). On the other hand, the hypnotists’ own subjective alterations of consciousness as represented by PCI H (dissociative control, positive affect, internal attention) are moderately or highly connected to the way they judged their interaction with the subjects (DIH). Thus, the various subjective aspects of felt trance state while hypnotizing seems to be more connected to the felt quality (especially intimacy) of the interaction, than the state of being hypnotized.

The application of DIH in a hypnotic sample fulfilled the aims and requirements set at the beginning of its development: This is an easily administered, quick method which can be applied for subjects and hypnotists, both in individual and group sessions.

Table 10.4. Comparison of DIH subscales in cases of low, medium, and high hypnotic susceptibility. In the post hoc comparisons, the upper index next to the relational sign indicates the Cohen value. * $p < .05$; ** $p < .01$

| DIH subscale (N=232 dyads) | Range of hypnotizability | N | mean | sd | Rank | Kruskal-Wallis H (df=2) | Significant post hoc pairwise comparisons |
|----------------------------|--------------------------|----|------|------|--------|-------------------------|---|
| Intimacy | low | 57 | 3.24 | 0.47 | 115.20 | 2.022 | |
| | medium | 98 | 3.22 | 0.49 | 110.60 | | |
| | high | 77 | 3.30 | 0.49 | 124.97 | | |
| Communion | low | 57 | 2.86 | 0.44 | 89.05 | 13.581** | L< ^{0.51} M* L< ^{0.68} H** |
| | medium | 98 | 3.10 | 0.48 | 121.07 | | |
| | high | 77 | 3.16 | 0.42 | 131.00 | | |
| Playfulness | low | 57 | 2.58 | 0.73 | 100.95 | 7.828* | L< ^{0.52} H** M< ^{0.28} H* |
| | medium | 98 | 2.75 | 0.77 | 112.90 | | |
| | high | 77 | 2.96 | 0.69 | 132.60 | | |
| Tension | low | 57 | 2.83 | 0.34 | 107.59 | 6.154* | L< ^{0.27} H* M< ^{0.25} H* |
| | medium | 98 | 2.82 | 0.53 | 109.53 | | |
| | high | 77 | 2.93 | 0.40 | 131.97 | | |

Table 10.5. DIH values of hypnotists and subjects, and their comparisons by Mann-Whitney test (situation E1) ** $p < .01$

| DIH subscales (N=232 dyads) | | Mean | sd | Rank average | Mann-Whitney U | Cohen d |
|--------------------------------|-----------|------|------|--------------|----------------|---------|
| Intimacy | Subject | 3.25 | 0.49 | 317.41 | 6749.5** | 1.74 |
| | Hypnotist | 2.16 | 0.76 | 144.85 | | |
| Communion | Subject | 3.06 | 0.46 | 172.99 | 13106.5** | 1 |
| | Hypnotist | 3.65 | 0.72 | 290.52 | | |
| Playfulness | Subject | 2.78 | 0.74 | 246.44 | 23214.0** | 0.24 |
| | Hypnotist | 2.59 | 0.80 | 216.43 | | |
| Tension | Subject | 2.86 | 0.44 | 300.02 | 10784.5** | 1.18 |
| | Hypnotist | 2.18 | 0.71 | 162.39 | | |

Nova Science Publishers, Inc.

SUBJECTIVE EXPERIENCE OF THE HYPNOTISTS IN THE HYPNOTIC INTERACTION

In his influential paper, Orne (1959) stated that the real essence of hypnosis lies in the subjective alterations experienced by hypnotized individuals. Fromm and her colleagues have stressed that controlled assessment and description of phenomenological aspects are crucial to the understanding of the nature of hypnotic phenomena (Eisen and Fromm, 1983; Field, 1965; Fromm, Brown, Hurt, Oberlander, Boxer, and Pfeifer, 1981; Fromm, Lombard, Skinner and Kahn, 1987–88; Kahn, Fromm, Lombard and Sossi, 1989; Lombard, Kahn, and Fromm, 1990). All of these papers were obviously speaking about the hypnotized subject. But to be truly interactional, one has to investigate both partners in the hypnosis session. That is why we wanted to test first if hypnotists are really involved in the process of experimental hypnosis, and if they would give rich and meaningful phenomenological data about their experiences.

For a long time, hypnotists have been neglected in hypnosis research almost completely. The question arises: Why? At the beginning of the history of hypnosis, the hypnotist (magnetizer) was considered central in the process; later this approach was reversed, because in 1813, Abbé Faria concluded that the process was more due to the subjects. During the past decades, both hypnosis research and clinical reports stressed the subjects' skills rather than the hypnotists' contribution to the process (see Baker, 1987; Frankel, 1987; Fromm, 1987; Gravitz, 1991; Hilgard, 1987; Lazar and Dempster, 1984).

In spite of all this, there are excellent works regarding hypnotherapists that describe (a) their countertransference (Gill and Brenman, 1959; Brown and Fromm, 1986); (b) the phenomenon of mutual hypnosis and the possibility of the therapists' trance state (Diamond, 1984; Tart, 1969; Scagnelli, 1980; Vas, 1993); (c) the therapist-patient relationship (Brown and Fromm, 1986; Gill and Brenman, 1959) and (d) the determinants of a successful hypnotherapist (Diamond, 1986; Lazar and Dempster, 1984).

However, we can find very limited information about the experimenter hypnotist: One of the reasons can be their reluctance to be analyzed and to uncover their own regressive, unconscious material in a professional setting (Gill and Brenman, 1959; Lazar and Dempster, 1984). This important limiting factor raises special methodological, motivational, and even ethical questions.

BOX 15. ACTIVE-ALERT HYPNOSIS

Éva Bányai developed the so called active-alert hypnosis in the Laboratory of E. R. Hilgard at Stanford University (Bányai and Hilgard, 1976). In this form of hypnosis – as opposed to the relaxational procedure – the subject is not sitting in an armchair, but is pedaling a stationary bicycle against a resistance as if riding uphill. Instead of the suggestions of relaxation and sleep characteristic of traditional hypnosis, the subject receives suggestions emphasizing effortless muscular work and mental alertness.

Comparative studies have proven that a specially altered state of consciousness occurs in this situation just as much as in the relaxational procedure: The subject performs the various test-suggestions at a similar rate, and the physiological indices are comparable in active-alert and in traditional relaxational hypnoses (Bányai, Mészáros, and Gósi-Greguss, 1980, 1983).

This work is relevant both from theoretical and practical aspects. The very existence of active-alert hypnosis proves that hypnosis is not a sleep-like state, and that relaxation is not an indispensable element of hypnosis. Thus, the essence of hypnosis may have to be looked for elsewhere.

From a practical aspect, active-alert hypnosis also opens the possibility for novel therapeutic applications (Bányai, Zseni, and Túry, 1993). It provides a great opportunity for patients to experience their activity, their (ego-)strength, and their effort they exert in the course of their recovery. The active-alert situation – as opposed to the maternal and paternal styles of transference in traditional hypnosis – is more likely to call for patterns of equal relationships: friendship and love styles (Bányai, 1991, 2008a).

The fact that the hypnotist does not remain unaffected in active-alert hypnosis, either, is clearly shown by the observation that the hypnotist, who only gave verbal suggestions, developed stiff muscles (Bányai, 1985b):

“...in the course of inducing active-alert hypnosis, the hypnotist, that is, I observed a puzzling subjective phenomenon. Although the subjects did not feel stiff after the overexertion on the bicycle ergometer I myself felt a rather strong stiffness in my thighs as if I had ridden the bicycle” (p. 195).

This phenomenon is a good example of the importance of multilevel approach to hypnosis: The subjective experience of the hypnotist highlights a phenomenon that reflects the deep mutual attunement between the dyadic partners in the hypnotic interaction.

Experimenter hypnotists are often regarded as immovable figures, functioning unflappably according to the protocol of the (standardized) experiment. There is no mention about the possibility of their emotional involvement, of real transference or counter-transference, of the possibility of leaving the normal, waking state of awareness, etc. Some influential theoreticians even explicitly deny the possibility of the development of archaic involvement within an experimental context (Shor, 1962).

Unfortunately, the subjective, inner feelings of the experimenter hypnotists are almost completely hidden. Even those who stress the importance of the investigation of subjective

experiences (Hilgard, 1968; Lynn and Rhue, 1991; Sheehan and McConkey, 1982) restrict themselves to the subjects' phenomenological data; it is quite rare that the hypnotists' experiences are explored in detail (Bányai, 1991; Bányai, Mészáros, and Csókay 1985; Varga, Bányai, and Gósi-Greguss, 1991; Varga, Bányai, Gósi-Greguss, and Horváth, 1992). This is all the more surprising if we consider that Diamond (1987) emphasized that the relational dimensions of hypnosis (transference, working alliance, symbiotic/fusional alliance and realistic relationship) operate subjectively.

So, before attempting to interrelate the subjective feelings of both participants of the hypnosis interaction, we should first know what their experiences are.

Free reports from hypnotists: Here we summarize our experimental data about the first steps of collecting and analyzing the subjective experiences of experimenter hypnotists (see Table 11.1, for further details see Varga, Bányai, and Gósi-Greguss, 1999). To get a systematic view on the hypnotists' phenomenology, free subjective reports have been gathered under controlled experimental settings regarding the most important contents of the subjective experiences of the experimenter-hypnotists. We were looking for the common topics in the independent reports of different hypnotists, inducing hypnosis either in a traditional way (TRH), or using active-alert hypnosis induction (AAH) (Bányai and Hilgard, 1976), supposing that the common elements should reflect the most important points in the hypnotists' phenomenology in general.

The present summary will deal with the experiences of hypnotists recorded under controlled circumstances after standard hypnosis sessions with healthy subjects. The common themes of the resulting material will be looked for. We assume that if a theme emerges in both of the two opposing forms of hypnosis (TRH and AAH), it will probably reflect a generally important node in the phenomenology of hypnotists, deserving to be the subject of future research.

Table 11.1. Basic data of hypnotists

| | Sex | Age | Hypnotizability | Background |
|-------|------------|------------|------------------------|-------------------|
| No. 1 | F | 42 | 0 (SHSS:B) | EE C |
| No. 2 | M | 33 | 5 (SHSS:B) | CC |
| No. 3 | F | 25 | 6 (HGSHS:A) | EE |
| No. 4 | M | 30 | 1 (SHSS:B) | EE |
| No. 5 | M | 32 | 12 (SHSS:B) | CC E |
| No. 6 | F | 49 | 0 (SHSS:B) | CC |
| No. 7 | F | 41 | 12 (SHSS:B) | CC |

After sex (**F**: female, **M**: male) and age, the hypnotizability of the hypnotists is presented according to the standardized scales (**SHSS:B**=Stanford Hypnotic Susceptibility Scale, Form B, Weitzenhoffer and Hilgard, 1959; **HGSHS:A**=Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor and Orne, 1962). The last column indicates the background of the hypnotist (**E**: experimenter, **C**: clinician; the number of the letters roughly represents the ratio of the involvement in these fields). Hypnotists Nos. 1–5 are the ones who applied traditional relaxational hypnosis, while hypnotists Nos. 6 and 7 used active-alert hypnosis.

11.1. METHOD

Seven hypnotists' free reports were collected regarding altogether 103 experimental hypnosis sessions in which they conducted hypnosis, either by TRH (5 hypnotists) or by AAH (2 hypnotists). In all of the sessions, healthy young volunteers – mostly university students – of different hypnotizability participated as subjects. The basic data of hypnotists involved in this experimental series are presented in Table 11.1.

In the cases of TRH, the subjects were hypnotized by standardized relaxational hypnotic induction procedures and test suggestions of the Stanford hypnotic scales (SHSS:A, SHSS:B, SHSS:C, Weitzenhoffer and Hilgard, 1959, 1962), which were read verbatim.

It was a common feature in the assessment of subjective experiences that the hypnotists were always asked for a free report immediately after the hypnosis sessions; the reports were not limited either in topic or in time. Essentially, it was the hypnotist who determined the amount and depth of the experiential material. They all received instructions aimed at facilitating the report of their experiences, emphasizing that all of their remarks, thoughts, and feelings were important and valuable, regardless of how important and valuable they appeared to them.

In the cases of hypnotists Nos. 1, 2, 6, and 7, the modified version of the Experiential Analysis Technique, namely Parallel Experiential Analysis Technique (PEAT, Varga et al., 1994, see Chapter 10) was used, in which the report of the subjective experiences are facilitated by the video playback of the original hypnosis session. Hypnotists Nos. 3 and 4 gave written reports, while hypnotist No. 5 tape recorded his experiences, all under quiet, undisturbed circumstances.

The standardized procedures of AAH sessions applied the active-alert versions of the test-suggestions (Bányai and Hilgard, 1976; Bányai, 1980). The subjects and the hypnotists did not know each other previously, and the hypnotists were blind to the subjects' hypnotic susceptibility. The sessions were video recorded in full length. After the hypnotic sessions, all of the hypnotists gave free reports. An encouraging instruction was given to them, stressing that all of their impressions, feelings, and remarks were important, they were asked to relate anything regardless of its perceived importance. These reports were video-recorded, then content-analyzed.

11.2. RESULTS AND DISCUSSION

Here we demonstrate and discuss three important topics that are common in the reports:

- (1) the way the hypnotist evaluated and reflected the context (situation) of the hypnosis session,
- (2) the subjective feelings reflecting the hypnotist's trance-like state, and
- (3) the (counter)transference reactions of the hypnotist (for more detailed results see Varga, Gósi-Greguss, and Bányai, 1999.)

Verbatim quotations will serve as examples for these features. The origin of the quotations is indicated by the number of the hypnotist (H) and the subject (S) of the given session. While reading the quotations, please note that the demonstrated phenomena occurred independently of the hypnotizability of the hypnotists, regardless of the way the report is gathered, and regardless of the professional background of the hypnotist.

11.2.1. The Context of Hypnosis from the Viewpoint of the Hypnotist

The outcome of the session is determined by the expectations and beliefs regarding the nature of hypnosis. Both the subject's (patient's) and the hypnotist's (therapist's) faith in the process play a major role in facilitating success (Diamond, 1986). This inevitably requires a unique attitude and a special mood in the hypnosis session. The context-generated expectancies and the role-demands of the situations labeled "hypnosis" are central elements in the social-psychological account of hypnosis (Spanos, 1986; Coe and Sarbin, 1977; White, 1941). Research shows that the way subjects conceptualize the situation of the hypnosis session – for example, whether they label it as "hypnosis" or as an "experiment on imagination" – has a surprisingly strong influence on their (hypnotic) performance (deGroot, Gwynn, and Spanos, 1988; Spanos, Gabora, Jarrett, and Gwynn, 1984; Spanos, Kennedy, and Gwynn, 1989).

Naturally the analysis of the same phenomenon on the part of hypnotists could be interesting: The way the hypnotist perceives the situation and interprets his/her own role may be influential on the subjects' perception, since the hypnotist directly or indirectly communicates his/her own attitude. If we have a more detailed picture about the hypnotists' attitude, it may take us closer to answering the burning question: What is the mechanism of the subjects' processing of contextual information having an impact on their performance and involvement in the situation?

About hypnosis

TRH (H3, S2) *"The presence of the observer was calming, though at the beginning she was not refined enough and it didn't fit to the fineness of the situation as she turned her pages, and stirred, and kept scratching. It didn't disturb me, I just realized that she was simply doing her job, without the feeling, that ... this is "something", a kind of holy, having a special spirit and atmosphere (the observer's behavior) is so vulgar, compared to the feelings between me and the subject... that silence and all devout attention and relationship in which all tiny hair's breadth trembling has its own significance."*

TRH (H3, A12) *"It amazed me again, as oftentimes: I even checked my watch, we were in the 13th minute, I looked at her, and was surprised, that here is this 'complete stranger', I have never seen her in my life, and here we are after some 10 minutes, that she is sitting here with a drooping head, open mouth, relaxed, and, visibly, she really accepts the suggestions. In cases of such stranger experimental subjects the thought always – or at least often – strikes me: How the hell is it? Why/how does an adult give himself up/over? Does hypnosis really exist? Do altered states of consciousness really exist? These ideas struck me again quite strongly today with this girl (pleasant surprise in the hypnotist's voice)."*

AAH (H6 S8/1): *"...There is no doubt, the active-alert hypnosis seems to change our energetic matters as well... extreme energies are involved here."*

Interactional aspects, togetherness, mutual involvement

TRH Q (H2, S3) “... she almost absorbs the suggestions, we proceed completely together, as I feel... I keep pouring, and she, like the thirsty ground drinks in the water... and nicely goes...”

TRH (H1, S6) “... the way I say... a completely equal relationship... I mean “let’s go together to this state...”

AAH (H6, A8/1) “she has turned to me many times, searching for my eyes, and it disturbed me all along, that I had to look at the text. I think she experienced a kind of loneliness, and it was bad for me, as well; it has destroyed our relationship.”

AAH Q (H7 S1/1) “we were both embarrassed... but it was not unpleasant...”

AAH Q (H7 S1/1) “... the way I speak... it is because of him... this gentle manner of speaking... so, as this whole was inspired by it... it was the tuning into him. So he is the reason that (my voice) is so gentle.”

AAH Q (H7 S1/1) “... somehow his feedback was so vivid, that it fired me with enthusiasm, completely, ... and I noticed how I read (laughing), so I’ve calmed myself down...”

Professional remarks

TRH (H2, S5) “I feel this is very important... in the introduction as a matter of fact, we repeat the conditions: to co-operate, to concentrate, and just to listen to my voice...this is the repetition of the rapport... If she stands this without uneasiness, she will accept the situation!”

AAH (H6, S2/1) “...during hypnosis you get the feedback from the face, the posture, the spinning of the pedal... and you can feel where we are...”

The role of the hypnotist:

TRH Q (H2, S14) “I just wanted to communicate, that she can calmly pay attention to her inside experiences... I protect her, I stand guard over her.”

General involvement of the hypnotist:

TRH Q (H5, S2) “I don’t know why, but during hypnosis I wanted to touch her many times... I had the wish to take her hand to... to.. let her feel my presence... or... or I don’t know, to have some direct connection between us this way.”

11.2.2. Signs of the Alteration of the State of Consciousness

The concept of the hypnotized subjects’ trance state is fundamental in the neodissociation theory (Hilgard, 1976, 1977/79), and it is an important element in the “state” or “special process” theories either as a causal variable, or just a characteristic of the hypnotized person. The possibility that the other participant of the dyad – i.e., the hypnotist – may get into an

altered state of awareness is well documented regarding *clinical* hypnosis sessions: mutual hypnosis (Tart, 1969), counter-trance (Vas, 1993), the client as hypnotist hypnotizing the therapist (Diamond, 1980), and related phenomena have both theoretical and practical

significance. But these studies present this issue as specific for therapeutic sessions and suppose that it is unlikely to occur in experimental hypnoses, and it is their common characteristic that the therapist leaves the waking-rational level intentionally, or at least in a quite controlled way. As “most hypnotherapist spontaneously experiences trance when hypnotizing their clients” (Diamond, 1984, p. 9.), Diamond stresses the importance of systematic research studying the hypnotherapists’ trance experiences in order to move from a purely speculative analysis of the nature of these phenomena (Diamond, 1984, 1987).

We think, and the quotations below support that the characteristics of trance(like) states (Ludwig, 1972, 1983) can be documented in experimental hypnotists’ reports as well. Tart (1972) and Orne (1959), among others, stress that the subjective conviction that somebody is in an altered state of consciousness (ASC) is a crucial factor in detecting the state. This subjective element is easily available for the person, so s/he can identify this state without doubt. Many theories postulate – in spite of the methodological controversies –, that the best index of an ASC is the person’s subjective experience of being in the state (e.g., Farthing, 1992; Haley, 1958; Pekala, Steinberg, and Kumar, 1986; Pekala and Kumar, 1989, Tart, 1972, etc.).

Bodily relaxation, detection of (one’s own) altered state:

TRH Q (H3, S11) “... and I was so relaxed or whatever, that sometimes I simply did not see the text, just some fuzzy dirt. Then the fact that I can’t see... but something should be done woke me up again.”

TRH Q (H3, S11) (after the 50 minute session) “I am extremely sleepy, as if I had been working for 10 hours with intense attention.”

TRH (H4, A4) “This is tragic, again! Several times I felt I was ready, I would faint, I don’t know what’s going to happen. Especially when I moved my head a little, I felt as if my head wanted to fall off my neck backward, as a watermelon rolls off a stand, and I had to catch it. And my eyes hurt terribly, I could barely see anything, it hurt above my eyeballs all the time, sometimes I even closed them, it was so much better this way, and I became more relaxed that I did not have to struggle wit my eyes...”

TRH Q (H4, S14) “When she pronounced her birthplace, I had a very strange feeling! Her presence suddenly became material, and my own voice became not-mine. As if I had realized at that precious moment that I was speaking. This surprised me. It seemed to me that I had not attended to my voice till then.”

TRH Q (H3, S7) “Many times I was also absorbed [...] the natural way of this would be, in my view, (if I weren’t forced to be in my right mind according to my role) that I keep talking to him on and on for a while, more and more softly, and then, slowly both of us would get to sleep. Like in my childhood, as we were chatting in the bed, and you didn’t care anything just talk in the dark, and suddenly realized, that you were asleep.”

TRH Q (H1, S10) “The rumbling in my stomach was due to relaxation ... it was extremely good, that I could relax... [...] this arose from her, because why would I relax in a situation like this?”

AAH Q (H6, S2/1) “when I hypnotize I am at least as hypnotized as the subject”

AAH Q (H7, S3/1) “it was easy for me to tune into his rhythm, and ... well ... it is possible that I got into a deeper hypnosis than him...”

Involuntariness:

TRH (H3, A8) *“Everything became white again. Today, there was already a ‘dream’-intrusion kind of thing, too; once I suddenly noticed that I believe to notice ‘left hand dominance’ in my mind. I suddenly got alerted WHOA, this ‘ain’t’ in the text, and I felt terribly ashamed of myself, and it also frightened me – this also woke me up, but then it happened again. Yet I WAS NOT SLEEPY at all before, and even this was no real ‘sleepiness’.”*

TRH Q (H1, S2) *“Look, I say things like this completely out of my control... I was not aware of this at all...”*

AAH Q (H7 S1/1) (arm rigidity suggestion) *“I simply had to raise my arm, I don’t know why... [...] I tried to let it down once, but it didn’t go. I felt that this was good, so I did it together with him, up to the end...”*

Increased imagination, dissociation of cognitive functions:

TRH Q (H2, S3) (regarding the dream suggestion) *“Here I had the feeling that I guarded her, took care of her dream, and after a while I also began to fantasize... I imagined a sea, with waves good for surfing... why not fantasize... I attend to her very much, I am taking care of her as well...”*

TRH Q (H5, S6) *“At this time, the scene of chatting on the corridor, university students’ chatting emerged inside me, where people more or less acquainted with each other are talking... These are the pictures that give information, evoke some feelings in me.”*

TRH Q (H5, S10) *“It is difficult to put my experience into words, because there are mostly pictures in me... When I entered, my first impression was that this man exists just inside of his skin [...] I had an image of a man sitting cross-legged... in rather primitive circumstances ... life goes on. And he is sitting there so calmly, because inside, he is lively, colorful, joyful, changing, strange, surprising, and mystic.”*

AAH Q (H7 S1/1) *“here, as if I had a picture in the meantime... as if I had seen myself from the outside... yes, as if I had seen myself from the outside... but I was engaged, so I don’t really remember what it was”*

AAH Q (H6, S2/1) *“when I hypnotize, at the dream suggestion, my fantasy begins to work, I start to dream...”*

Common feelings, organic involvement:

TRH Q (H5 S1) *“During the time I felt a common floating... [...] I felt the relaxing instructions having an effect on me as well.”*

TRH Q (H5, S4) *“It was interesting... from the middle of the session, as if the rumblings in our stomach communicated with each other... she rumbled one, then me, she and me ... at the end it was evident.”*

Effectiveness of suggestions (on hypnotist):

TRH Q (H5, S9) *“Sometimes I felt... that we were definitely together... feel together... maybe it was me, who felt it, but I think she also felt this kind of easiness, those kinds of effects of the suggestions that I myself felt, what I wanted to get”*

AAH Q (H6, S2/1) *“when I hypnotize, my arm gets heavy first, [...] at the arm rigidity I feel that my arm is rigid and stiff, in spite of the fact that I am the one who gives the suggestion”*

General positive effects of hypnosis/hypnotizing (on hypnotist):

TRH Q (H1, S10) (at the beginning this hypnotist complained about heart-pains, hunger, extreme exhaustion, and other uncomfortable feelings) “... when one reaches togetherness... as she turned her head, some physical power appeared inside me, and I got warmer, so my blood... and my cheek got flushed... it was a good feeling, physically...”

TRH Q (H1, S1) “at this moment, I had a feeling in my body [...] it was a strange feeling: ‘Don’t go further!’ ... as if I had entered a circle, and I felt: ‘Back! It is too fast for her!’”

AAH Q (H7 S1/1) “...I had an entirely pleasant feeling... all the way from now on... it was comfortable for me... [...] it was very good for me... so it was enjoyable to read in this strange hypnosis...”

AAH Q (H6, S2/1) “In the case of a good hypnosis, I myself come out with liberated feelings.”

Spontaneous partial amnesia:

TRH Q (H5, S6) “Although I have just left the room, I can’t remember his face... all I know, that on one side, but just on one side, there was more red, more colorful, than on the other”

TRH Q (H3, S6) “In the second part, it startled me what sort of things I found in the text! I was sure, that I had not told these things to the previous girl” (The text was that of SHSS:B; the hypnotist was administering this text about the fiftieth time in her life.)

TRH Q (H1, S9) “I definitely remember that I had something in my mind at this point, but I don’t remember what... I have no idea.”

AAH Q (H7 S1/1) “I was not sure even that he had said ‘21 years’ (actually it was half a minute earlier), and it is very difficult for me to remember what they say, ... the numbers ... Hypnosis is difficult at these times, surely...”

The shift from the normal state of awareness on the part of the hypnotist is explained by some theories as “dependency needs (that) are revoked by the subjects’ regression” (Lazar and Dempster, 1984, p. 32), or as the hidden wish to satisfy his regressive longings (Gill and Brenman, 1959), and related dynamic/analytic concepts. The signs of ASC are possibly the natural consequences of the setting of hypnosis and the role of hypnotizing itself.

The hypnotist focuses on the subtleties of communication, because the message must have the form that would be the most conducive to the subject’s frame of reference or awareness (e.g., trance state) (Diamond, 1986, p. 239). The intensive concentration, the extremely detailed observation of the subject, and absorbed attention are all factors that may lead to ASC, and “may evoke greater sensitivity to and feeling of intimacy” (Lazar and Dempster, 1984, p. 32) with the subject. To reach this, the hypnotist usually moves from the normal state of awareness to getting closer to the subject’s state. Usually deep, physical-bodily involvement may help the hypnotist to bridge the gap between himself or herself and the patient (Bányai, 1991; Bányai, Gösi-Greguss, Vágó, Varga, and Horváth, 1990; Diamond, 1987).

We cannot forget, though, that parallel with these alterations in cognitive functioning the hypnotist *must* keep control and takes responsibility of the whole process. This requirement involves dissociation on his/her part: At least one subsystem must keep the functions of

reality-testing, planning and monitoring. It is needless to stress, again, that the notion of “dissociation” has been “reserved” for the subjects so far.

Diamond (1984, 1986, 1987) strongly stresses in his writings that the therapists’ trance is a contribution of hypnotherapists in their clinical practice. This “facilitates the ability to be empathic with and receptive to the patient” (Diamond, 1986, p. 243), which in turn facilitates the therapist’s ability to employ a ‘language’ appropriate to the patient’s operative state of consciousness” (p. 244).

Others (Hammond, 1991) also discuss the possibility of “going into a trance oneself, and simply ‘trusting the unconscious’ to formulate suggestions and conduct hypnotherapy” (p. 38), Enhanced receptivity and empathy are obviously important in experimental settings as well, and the issue of “appropriate language” is especially interesting in the experimental context. The nature of the message exchanged between the hypnotist and subject is always determined in the hypnotic context (Haley, 1958), but consider that almost all controlled experiments employ standardized, verbatim inductions and suggestions. The experimenter-hypnotists’ ASC may urge them to use a language according to the demands of their own trance states instead of the standard protocol. The restrictions of the standardized text may increase the hypnotists’ inner tension (dissociation), leading them at a certain point to break the rule. This way, the amount and type of departure from the standardized text and changes in affective prosody (Gösi-Greguss, Bányai, Varga, and Horváth, 1992; Gösi-Greguss, Bányai and Varga, 1996; Gösi-Greguss, 2002; Gösi-Greguss, Bányai, Józsa, Suhai-Hodász, and Varga, 2004) may be one of the objective indices of hypnotists’ trance states.

11.2.3. Transference on the Part of the Hypnotist

The relationship between hypnotist and subject is most commonly approached by the process of transference or archaic involvement (Horváth, Bányai, Varga, Gösi-Greguss, and Vágó, 1988; Nash, 1991; Nash and Spinler, 1989; Sheehan, 1980).

Since the controlled study of the relational dimension was almost entirely based on some kind of *manipulation* of the relationship between hypnotist and subject (e.g., the atmosphere of the session was made impersonal, the hypnotized subject was evaluated negatively, etc. See Lynn and Weekes, 1991; Sheehan and Dolby, 1979), the hypnotists had no opportunity to have their “own” feelings regarding the subjects, since they had to behave in accordance with the protocol. Although it is less of a manipulation, but standardized experimental hypnoses also prescribe a certain kind of behavior and *a certain* kind of text the hypnotist may use in the situation; thus, the hypnotist’s real feelings and emotions regarding the hypnotized subject stay hidden – at least until we ask him about his experiences.

Our results showed that an accidental unusual physical resemblance to some relative or other important person in the hypnotist’s life evokes the transference feelings. Our material yielded rich data in this area, too:

TRH Q (H4, S9) *“I have always been in good relationship with these kinds of big, baby-faced women, but I am not dominating. They mother me a bit, and I relate to them with some childlike tyranny, with some masculinity appearing from time to time.”*

TRH Q (H1, S9) "... I have a countertransference with this boy ... it is fantastic... but really... now I realize more clearly [...] that I don't want him to go into hypnosis: 'You are relaxed, deeply relaxed' I say, but I kind of tense my hand..."

TRH Q (H2, S5) "I am extremely embarrassed, completely fascinated... she is very pretty, indeed, ... she has beautiful eyes... I had an acquaintance long time ago having exactly the same eyes... and the hairstyle... I thought at first that it was her, but the name... it was different... As she looked at me, I was completely confused... she charmed me... I didn't know which leg to sit on (laughing)."

TRH Q (H4, S9) "As she got relaxed, her mouth curved down, and it made her awfully antipathetic to me.. Her face became so aggressive. It disturbed me! She reminded me of the secretary of dr. K" (K: head of another department)

TRH Q (H2, S9) "I was helpless with this girl... there is something in her smile... As if she was smiling, but she didn't... she is so bitter, very bitter... And very skeptical... so old-womanish [...] there is no comment to my question whether we could work together... no answer... nor emotionally... just this wry distance... when somebody is looking at the other's garden that is there, but she is reserved. In this phase, I haven't really decoded this, I see now, but I felt that it was not OK.

Oh, this is a fuc... (sic!) terrible situation, I feel myself like a whore who is trying to please and I am blown... [...] I don't know... we are in the sixth minute, after all, and... (Referring to the sixth minute of the hypnosis session!)

"Now, looking back, she is totally antipathetic [...] I think she is immature... who undertakes a situation, then begins her maneuvers, like 'it would be better to sit in silence'... it is a bit uncritical... I go to hypnosis, to the sanctuary, first time in my life, and say things like this to the hypnotist... no... well, it is no..."

"... when you try to do psychotherapy with those real robust, undifferentiated patients who are somebody's somebody... and they trip me up... it is a real countertransference in me, you try, because something must be done, but it simply doesn't work.. [...] she is extremely antipathetic... she elicited the experiences working with the most antipathetic patients."

TRH Q (H5, S1) "The brown eyes and the brown hair, it seems to me, deeply influenced me... These kinds of girls have richer emotions, they give themselves up more easily, and they are more easy-going... Her brown eyes were very attractive, indeed."

TRH Q (H5, S4) "She is a kind of woman whose eyes are worth looking into for a long... long time... yes ... The one whom you snap up into your arms willingly... her body as well... If..." (Takes a deep breath, coughs, and turns to another topic)

TRH Q (H5, S14) "She reminded me of spoiled babies [...] who have learnt in earlier relationships, that (...) they have to demand, stamp their feet, otherwise, nobody cares... With this lady, it would be good to grab her from two sides, take her two arms, raise her up and let her run, run, run, run, run, run, run, run, and as she have foamed with rage put her down and keep her tightly... and say to her: 'You have calmed down, haven't you?' hh hh hh and gasp for breath"

AAH Q (H2 S8/1) "I like this type of persons so much... this very clever, very intelligent, .. and somehow very good type of persons... I really like... All in all, this Rita is a really nice girl."

AAH Q (H6, S2/1) "she was a sweet little girl... she stole her way into my heart, really, ... I take a shine to these kinds of girls... It was like playing."

TRH (H3, A11) "These kinds of men irritate me very much: This pink-headed, heaving, thick-lipped, slimy figure. ... I had a feeling that he does not even understand what the structure of the suggestion is, that this is only a challenge, and its essence is that he will not succeed, but it never reaches his mind, because before that he has already heard the name of some behavior, and it pops off immediately as a gun, he did it quickly,

and his brain can no longer take in anything else. All this was so foolish and ridiculous [...] that I almost burst out laughing.”

It can be seen, that most of the time, it was an accidental physical resemblance to some relative or other important person in the hypnotist's life that evoked the transference feelings. Similar phenomena were reported by Whitehead et al. (2008). They also found in experimental hypnoses that judgments based on the first impression and on stereotypes present in the hypnotists that may then influence the behavior and experiences of the hypnotists with respect to the given subjects were very frequent.

An experimental hypnosis session is a very special situation: Two persons, formerly complete strangers, meet for the first time in their lives, enter an interactional process where the ways they seat themselves (proxemics), the way they communicate and distribute information-channels (one with closed eye, other influencing by mere words) is very special, they must reach a predetermined goal under limited time with special means, and the whole process is recorded under very detailed observation. In this intense, sometimes embarrassing situation it is natural to re-evoked earlier relationship-patterns and find one's way in the situation by their help. Watchel's comment on transference is especially relevant here: "(it) need not be viewed as a completely autonomous inner disposition, but rather as a particular way of organizing new stimulus input, *based, but not completely unresponsive to the actual situation*" (Watchel, 1973, p. 328, emphasis added). It is important to see that other interpersonal situations also share the above listed strange characteristics of (experimental) hypnosis sessions: Consider for example the work of emergency units, accident departments, or crisis intervention.

Brown and Fromm (1986) define countertransference as a situation, where the "therapists sometimes look at patients through the distorting lenses of the past. They may feel for and about certain patients, and react to them, as if these patients were important figures from their own past" (Brown and Fromm, 1986, p. 215). These occasions are supposed to be dangerous for the success of the therapy, even the transfer of the patient to another therapist is suggested (Lazar, 1984; Brown and Fromm, 1986).

In our view, the above examples match this and other definitions of (counter)transference: e.g., "complex mode of interpersonal relation in which the therapist (hypnotist) comes to assume a particular importance for the client (subject) that is not accounted for in terms of normal social or psychological processes of interaction" (Sheehan and Dolby, 1979, p. 573).

In this case, though, the detection of signs of countertransference in *experimental* hypnosis sessions has some important implications: (a) What can or must be done if experimental settings are "infected" by these transference feelings on the part of the experimenter-hypnotist? Can we say that the experiments remained standardized, well controlled situations? What if one of the most important features of the hypnotists' involvement – that is, (counter)transference – remains uncontrolled or undetected? (b) As almost all of our experimental settings showed the signs of some types of (counter)transference feelings, one can hypothesize that this phenomenon must be more frequent in clinical settings as well. If this is true, it is a natural phenomenon rather than an unwanted side-effect to be minimized. Close analysis of the countertransference reactions in experimental context may help to differentiate helpful countertransference – as a way for

being in tune with the various aspects of the patient's personality – from antitherapeutic one (see Diamond, 1987, about this distinction).

Clearly, the aim of the hypnotist is to find an appropriate position for himself or herself in the dimension from drive-organized primary process to concept-organized secondary ones (Hilgard, 1962) so as to be able to gain the most from the benefits of the functions of the dissociation (Ludwig, 1983).

11.3. GENERAL DISCUSSION

The research findings presented here – although they are only anecdotal in their present form – were related to the experiences of hypnotists and the (subjective) state of hypnotism (the act of hypnotizing). This leads us to a field that has never been studied systematically by anyone, least of all in experimental settings.

It is known that it is mainly the low and medium susceptible persons who are the most sensitive to the interpersonal behavior of the hypnotist (Lynn and Weekes, 1991). Since the majority of the population belongs to this range of hypnotic susceptibility, it seems to be especially important to study the hypnotist as a real participant of the hypnotic interaction (not just as a narrator in the role play along situational norms and expectations of others, (Laurence, 1997). If we understood the interpersonal atmosphere of the hypnosis situation better, we could probably make hypnosis more efficient in the general population, too.

BOX 16. THE EXPERIENTIAL PROFILES OF SUBJECTS AND HYPNOTISTS

The results of the PCI assessed after the standard hypnosis sessions can give us a picture of the experiential profile of this type of hypnosis, and numerical data on the phenomenology of hypnotism (administering hypnosis).

Pekala and Kumar (1987) have already published some data on the PCI profiles of subjects, (these values are given in Table box16.1. for informational purposes). From our aspect, it is especially interesting to see – what we have not seen in the literature yet – what values are given by the hypnotists with respect to standard hypnoses.

As can be seen in the Table, the hypnotists' scores on the scales of Attention and its Direction differ significantly (and with great size effect) from those of the subjects, marked differences with large effect sizes (.3 and above) can be seen in the Arousal and Body image scales, and moderate effect sizes are seen in Positive emotions (especially Love) and Volitional control. Nevertheless, in the overall picture we can see that hypnotizing brings about similar alterations of consciousness as being hypnotized: The hypnotists report similar extent of changes in meaningfulness, concentration of attention, imagery, self-awareness, altered state of consciousness, memory, and internal dialogue. These data are similar to those received from the free reports of the experiences of our hypnotists.

Table box 16.1. Mean values and standard deviations of the dimensions of PCI in subjects and hypnotists after standard hypnosis sessions (278 SHSS:A hypnosis sessions). Size effects (Cohen d) over .3 are highlighted in bold
 (* p<.05, ** p<.01, *** p<.001)

| Main and sub dimensions of PCI., 2., 3., 4. | Kumar's (1987) data on subjects After | Individual hypnosis sessions (SHSS:A) | | | | | |
|---|---------------------------------------|---------------------------------------|------|------------------|------|--------------|----------------|
| | | Hypnotists (n=18) | | Subjects (n=278) | | Cohen d | Mann-Whitney U |
| | | Mean | sd | Mean | sd | | |
| Altered Experience | 2.37±1.27 | 1.57 | 1.32 | 1.92 | 1.16 | 0.28 | 30998.0*** |
| Body image | 2.90±1.65 | 1.66 | 1.69 | 2.38 | 1.46 | 0.46 | 27547.5*** |
| Time sense | 3.29±1.86 | 2.31 | 1.98 | 2.51 | 1.95 | 0.10 | 35879.5 |
| Perception | 2.02±1.73 | 1.28 | 1.51 | 1.61 | 1.47 | 0.23 | 32051.0** |
| Unusual Meaning | 1.54±1.39 | 1.16 | 1.18 | 1.34 | 1.13 | 0.16 | 33741.0* |
| Positive affect | 1.42±1.43 | 1.62 | 1.13 | 1.25 | 1.00 | -0.34 | 30807.5*** |
| Joy | 1.60±1.64 | 1.27 | 1.50 | 1.08 | 1.38 | -0.13 | 35244.5 |
| Sexual excitement | 0.84±1.57 | 0.63 | 1.20 | 0.35 | 0.92 | -0.27 | 33396.0*** |
| Love | 1.81±1.78 | 2.96 | 1.65 | 2.33 | 1.78 | -0.37 | 29906.0*** |
| Negative affect | 0.70±1.04 | 0.44 | 0.80 | 0.40 | 0.74 | -0.04 | 36465.5 |
| Anger | 0.67±1.20 | 0.41 | 1.02 | 0.41 | 1.05 | 0.01 | 36745.5 |
| Sadness | 0.74±1.28 | 0.56 | 1.04 | 0.46 | 0.97 | -0.10 | 35208.5 |
| Fear | 0.69±1.28 | 0.33 | 0.82 | 0.33 | 0.84 | 0.00 | 37346.5 |
| Attention | 4.09±1.26 | 3.02 | 0.80 | 4.08 | 1.08 | 1.13 | 16207.0*** |
| Direction | 4.02±1.51 | 2.19 | 1.04 | 4.06 | 1.23 | 1.65 | 9985.0*** |
| Concentration | 4.19±1.54 | 4.27 | 1.27 | 4.12 | 1.45 | -0.11 | 36282.0 |
| Imagery | 2.25±1.51 | 2.12 | 1.27 | 2.25 | 1.43 | 0.10 | 36737.0 |
| Amount | 2.10±1.82 | 1.82 | 1.37 | 1.78 | 1.64 | -0.03 | 36103.0 |
| Vividness | 2.41±1.64 | 2.41 | 1.50 | 2.71 | 1.58 | 0.19 | 34308.5* |
| Self-awareness | 3.28±1.73 | 4.75 | 1.25 | 4.36 | 1.39 | -0.30 | 31214.0*** |
| Altered Awareness | 3.70±1.91 | 1.88 | 1.70 | 2.33 | 1.74 | 0.26 | 32357.5** |
| Arousal | 1.42±1.47 | 2.12 | 1.17 | 1.43 | 1.36 | -0.55 | 24551.0*** |
| Rationality | 3.40±1.78 | 4.69 | 1.27 | 4.61 | 1.26 | -0.06 | 36431.5 |
| Volitional Control | 2.70±1.66 | 3.62 | 1.26 | 3.16 | 1.34 | -0.35 | 31080.5*** |
| Memory | 3.91±1.66 | 4.26 | 0.98 | 4.56 | 0.99 | 0.30 | 31637.5*** |
| Internal Dialogue | 1.95±1.96 | 2.74 | 1.69 | 2.51 | 2.04 | -0.12 | 35356.5 |

As it has long been recognized in the clinical application of hypnosis that the feelings and reactions in the therapist may be even of diagnostic value (see, e.g., Lazar and Dempster, 1984), perhaps the research side should also pay serious attention to the person and the experiences of the hypnotist, too. Lazar's conclusion, namely, that the therapist as a person is an important tool in the process of hypnotherapy; his personality, subjective experiences, and skills are important factors of therapy (Lazar and Dempster, 1984), can be translated and applied easily to experimental hypnosis situations, too.

The traditional image depicts the hypnotist as a figure blessed with omnipotent magic skills, who puts the hypnotized person into trance with his piercing look and mysterious methods. Unavoidably, this puts a pressure even on today's hypnotists in the direction of achieving dramatic changes quickly. A more realistic and humanized image about the hypnotist and the process of hypnotism could be useful already in the training of hypnotists, but it may also decrease the unrealistic expectations from themselves, the guilty feelings, doubts, and self-criticism even of colleagues who have had several decades of practice.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

CAN EXPERIENCES BE SIMULATED?¹

It is an interesting question if experiences characteristic of hypnosis can be simulated similarly to the behavioral simulation of hypnosis. The interactional approach of our laboratory provides an opportunity to study if it is reflected in the experiences of hypnotists if they were hypnotizing simulators (see the Box 8 on Simulator Design in Chapter 6).

The classical studies of the simulator paradigm (Orne, 1969, 1970, 1971, 1972, 1973) give no clue in these questions. The *actual* experience of the subjects asked to be simulators were not reported in any of Orne's studies, and there has never been an instance where the instruction to simulate was extended to the period of reporting subjective experiences. Regarding the hypnotist's experiences, the only thing we can learn from Orne's papers is that it appeared to be evident for an onlooker who was and who was not a simulator, while doing hypnotism actually, even Orne himself was unable to catch the simulators.

12.1. METHOD

Our experimental series called SZIA (see Appendix II for further details) made it possible to address this issue. The 4 hypnotists of this experiment were free to develop rapport with the subjects, and then hypnosis proper began with a standard induction. In the course of deepening, the subject received an analgesia suggestion to his or her non-dominant hand. The effect of this suggestion was measured by the cold pressor test, which was followed by three trance-logic tasks (age-regression suggestion to the fifth and second grades, and hallucination of a curtain). The session was closed by dehypnosis, after which there was a transition for reporting subjective experiences (see Appendix VI). Every hypnotist met an equal number of subjects with high, medium, and low hypnotic susceptibility and simulators. Naturally, the hypnotists were not informed about the hypnotic susceptibility scores of the subjects until the very end of the whole experiment, and they did not know about the existence of simulators at all.

¹ The research presented in this chapter has already been reported in our earlier studies (Bognár, Varga, Bányai, and Gósi-Greguss, 2000, 2002)

BOX 17. INSTRUCTIONS FOR SIMULATORS

Today your task will be, when working with the hypnotist,, to convince him (her) that you are an excellent hypnotic subject and that you are in deep hypnosis.

The hypnotist does not know that you are faking hypnosis, but he does know that *it is possible to simulate hypnosis*. As soon as he (she) recognizes that you are not in hypnosis, but are faking it, he (she) will stop the experiment immediately. Therefore, as long as he continues with you, you know you have been successful in doing this task.

I cannot tell you what will happen today, or how a hypnotized subject should behave in a situation like this. You have to rely on your own judgment.

After hypnosis, we will ask you to fill out several questionnaires, and will ask you various questions about hypnosis. During this time, please answer these questions the way highly hypnotizable subjects would answer. Thus, until I come back to this place and sit in this very same chair, just continue to play this role, and respond the way you think highly hypnotizable people would respond.

This is a difficult task, but we know from previous studies that intelligent people are able to do this. Good luck.

Answering the main questions – that is, if the experience of hypnosis can be simulated or not, and if the presence of simulators can be detected in the experiences of the hypnotists – required us to collect the most diverse collection of experience. To this end, we collected several paper-and-pencil tests, collected free reports of experiences by the method of PEAT where both the subjects and the hypnotists could freely relate their experiences independently of each other. It is an important feature that the simulators remained in their role as simulators all the time, that is, they gave answers in the course of reporting their subjective experiences that they thought would be given by people highly susceptible to hypnosis.

The collected tests were as follows:

- **Field Hypnotic Depth Scale:** It is a 38 item scale measuring the subjective depth of hypnosis; the characteristics of the experiences felt by the subject during hypnosis can be measured by it (Field, 1965, see also Chapter 9.).
- **Dyadic Interactional Harmony questionnaire (DIH):** It was administered both to the subjects and the hypnotists.
- **Archaic Involvement Measure (AIM):** The 22-item version (AIM all) was used in which the original 19 items (AIM+, Nash and Spinler, 1989) were supplemented by 3 negatively charged items (AIM-) for the subjects. The “reversed” version of all items was administered to the hypnotists, which referred to the archaic involvement of the hypnotist toward the subject (see Bányai, Gósi-Greguss, et al., 1990; Horváth, Bányai, et al, 1988; Bányai, 2008a, and Chapter 10).
- **Phenomenology of Consciousness Inventory (PCI):** It was given to both the subjects and the hypnotists to characterize their consciousness.

There were some additional, non-standardized scales regarding involuntariness and rapport (whose results are not reported here). After filling out the questionnaires, PEAT was administered; that basis of PEAT was the video-recording of the section from the beginning of the cold pressor test to the end of the curtain hallucination.

In the next section I am going to present the data of the paper-and-pencil tests, then I will show the results of the free reports of experiences (PEAT) received by the various methods of analysis.

12.2. RESULTS

12.2.1. Results of the Tests

The outcomes of ANOVA and the post hoc pairwise comparisons (Scheffé method) of the 4 groups of subjects are shown in Table 12.1. for the Field, AIM and DIH questionnaires, while the ANOVA of the different dimensions of PCI are shown for the four groups in Table 12.2.

It can well be seen that there is no or barely any overall difference among the four groups. The simulators did not fall behind the others in the tests measuring subjective experiences; in fact, – similarly to their behavioral “overreaction” – sometimes they surpassed even the highly susceptible subjects. It deserves attention that the simulators passed even the internal reliability scale of PCI easily; in fact, their values are the best of the four groups (this scale is designed so that some items are repeated within the test, and the degree of difference of answers given to the same questions are reflected by this scale value. Thus, low reliability values indicate consistent answers.)

The test results of hypnotists – AIM, DIH, and PCI – showed no differences as a function of hypnotic susceptibility of the subjects or whether they hypnotized real or simulating subjects.

12.2.2. Processing Free Reports of Experiences

The experiences of the subjects and the hypnotists as revealed by PEAT were processed at several levels:

- There was a *global* evaluation of the subjective reports of the subjects and the hypnotists,
- The reports were subjected to *classical content analysis*,
- The reports were analyzed by a computer at the *level of words*.

Table 12.1. Results of ANOVA of tests filled out by the subjects (Field, AIM, DIH) in the four types of groups, and significant post hoc pairwise comparisons (Scheffé's method). Effect size (Cohen d) is in the upper index of the relational signs

| Tests | High (H) | | Medium (M) | | Low (L) | | Simulators (S) | | F (3,28) | P | Significant post hoc pairwise comparisons |
|-----------------|----------|-------|------------|-------|---------|-------|----------------|-------|----------|-----|---|
| | x | sd | x | sd | x | sd | x | sd | | | |
| Field | 15.37 | 4.17 | 15.50 | 3.85 | 10.75 | 3.37 | 19.87 | 3.60 | 7.85 | .00 | $G <^{2.62} S$ |
| AIM+ | 54.25 | 26.45 | 68.12 | 21.10 | 56.12 | 19.76 | 89.50 | 21.44 | 4.21 | .01 | $E <^{1.47} S$ $G <^{1.62} S$ |
| AIM- | 5.12 | 2.99 | 4.12 | 1.80 | 3.38 | 0.74 | 4.37 | 0.91 | 1.22 | .32 | |
| AIM total | 59.37 | 25.61 | 72.24 | 21.95 | 59.50 | 19.65 | 93.87 | 2.12 | 4.19 | .01 | $E <^{2.49} S$ $G <^{3.16} S$ |
| DIH Intimacy | 3.04 | 0.67 | 3.50 | 0.79 | 2.67 | 0.95 | 3.26 | 0.74 | 1.53 | .22 | |
| DIH Communion | 4.26 | 0.52 | 4.71 | 0.28 | 4.18 | 0.69 | 4.58 | 0.38 | 2.11 | .12 | |
| DIH Playfulness | 3.81 | 0.98 | 4.18 | 0.86 | 3.78 | 0.81 | 4.34 | 0.61 | 0.90 | .45 | |
| DIH Tension | 1.37 | 0.40 | 1.57 | 0.42 | 1.46 | 0.39 | 1.39 | 0.42 | 0.37 | .77 | |

Let us review these results.

- a.) In the case of *global evaluation*, two independent judges watched the two video playbacks (the reports of the hypnotist and the subject) simultaneously, and made a global judgment about the concordance or harmony between the experiences of the hypnotist and the subject on the basis of their impressions on a seven point scale (-3 to +3).

Negative numbers indicated conflicting or contradictory nature of the reports, while positive numbers meant harmonious, concordant reports.

There was only a moderately positive relationship between the evaluations of the two independent judges for the whole sample ($r=.400$, $p<.05$). However, if the concordance between the two judges were measured separately for the real and the simulating subjects, there turned out to be a highly significant positive correlation between them for the real subjects ($r=.561$, $p<.001$), while coding proved to be completely unreliable in the cases of the simulators ($r=.079$).

From here on, this result made it pointless to make further inquiries (in comparing simulators and real subjects), while the "spectacular" difference in the reliability of coding between real and simulators is remarkable.

- b.) *Classical content analysis* was extended to the experiences of both the subjects and the hypnotists. The reported experiences were typed, and two new, independent judges worked with the written material. Processing of the data of the subject used the category system developed in a previous study (Varga, 1991); we used the part that referred to the altered states of consciousness (see Appendix III). In the case of the hypnotists, two expert analysts reviewed the whole material and determined the categories that were represented in the experiences of the hypnotists with a sufficient load and that would bring us closer to our question:
- 1.) Experiences of the hypnotist *regarding the subject*.

- 2.) Experiences of the hypnotist regarding the *interaction* during hypnosis.
- 3.) The hypnotist's evaluation about the subject's *hypnotizability and/or depth of hypnosis*.
- 4.) The hypnotist's experiences regarding the *experimental situation*.
- 5.) The hypnotist's remarks regarding the *different test-suggestions*.
- 6.) Factors *disturbing* the hypnotist.

Content analysis was carried out altogether by nine judges: Two judges performed the content analysis along the 1st category, another two made the analysis along the 2nd category, and another two along the 3rd one, while the seventh, eighth, and ninth judges performed the analysis along the 4th, 5th, and 6th categories, respectively.

We used data on which both judges agreed, based on the frequency of the individual categories. The frequency of the different categories was made independent of the length of the text (and thus comparable) by relating the original frequency value to the length of the text in number of characters, following Gottschalk's formula (Gottschalk, Lolas, and Viney, 1986).

Modified value = $\sqrt{N \times CF + 1/2 CF}$, where N=number of characters in the given text, CF=100/N

In classical content analysis, factor analysis on the experiences of the subjects resulted in a single factor, that explained all the variance (Cronbach alpha .97). This is not surprising, since we used only the categories that were developed for altered states of consciousness from a larger system.

The first six factors emerging in the factor analysis carried out on the categories of classical content analysis of the hypnotists' experiences explained 88% of the variance (Cronbach alpha .85), including 21 or the 23 items of the original category system.

Based on the results of factor analysis, the following six subscales were developed from the experiences of the hypnotists (the categories that belong to the given subscales are listed after the names of the scales):

- **Evaluation of the subject:** sum of all remarks about the subject, negative remarks about the subject, low hypnotic susceptibility/superficial hypnosis, neutral remarks about the subject, negative remarks about the interaction, neutral remarks about the experimental situation
- **Strong suggestions:** high hypnotic susceptibility/deep hypnosis, curtain-suggestion and the sum of all test suggestion (number of remarks regarding the four test suggestions)
- **Difficulties:** negative remarks regarding the experimental situation, disturbing factors during hypnosis, disturbing factors during PEAT
- **Good interaction:** positive remarks about the interaction, total number of remarks about the interaction, positive remarks about the subject
- **Age-regression:** age regression to the fifth grade, age regression to the second grade, positive remarks about the experimental situation
- **Ambivalence:** ambivalent or fluctuating hypnotizability/hypnosis, medium hypnotic susceptibility/hypnosis

Table 12.2. Results of ANOVA of the main (in bold letters) and sub-dimensions of PCI filled out by the subjects in the four subject groups, and significant post hoc pairwise comparisons (Scheffé's method). Effect size (Cohen d) is in the upper index of the relational signs

| | High (H) | | Medium (M) | | Low (L) | | Simulators (S) | | F (3,28) | P | Significant post hoc pairwise comparisons |
|---------------------------|----------|------|------------|------|---------|------|----------------|------|----------|------|---|
| | x | sd | x | sd | x | sd | x | sd | | | |
| Altered Experience | 3.35 | 1.24 | 2.57 | 1.25 | 1.50 | 0.61 | 3.48 | 1.04 | 5.79 | 0.00 | L< ^{2.00} H, L< ^{2.40} S |
| Body image | 3.91 | 1.67 | 3.37 | 1.38 | 1.00 | 1.09 | 3.50 | 1.82 | 7.27 | 0.00 | L< ^{2.11} H, M< ^{0.35} H, L< ^{1.72} S, |
| Time sense | 4.29 | 1.83 | 2.91 | 1.37 | 3.37 | 1.64 | 4.54 | 0.63 | 2.22 | 0.10 | |
| Perception | 3.45 | 1.94 | 2.25 | 1.95 | 1.25 | 1.03 | 4.04 | 1.49 | 4.56 | 0.01 | L< ^{2.21} S |
| Unusual Meaning | 2.15 | 1.11 | 1.96 | 1.96 | 0.65 | 1.01 | 2.25 | 1.86 | 1.84 | 0.16 | |
| Positive Affect | 2.06 | 1.00 | 2.10 | 1.18 | 1.58 | 1.58 | 1.75 | 1.62 | 0.38 | 0.76 | |
| Joy | 2.18 | 1.22 | 2.12 | 1.59 | 1.25 | 1.19 | 2.06 | 2.09 | 0.63 | 0.60 | |
| Sexual Excitement | 0.62 | 1.18 | 0.68 | 1.03 | 0.87 | 1.64 | 0.18 | 0.37 | 0.51 | 0.67 | |
| Love | 3.37 | 1.30 | 3.50 | 1.46 | 2.62 | 1.21 | 3.00 | 1.85 | 0.57 | 0.63 | |
| Negative Affect | 0.16 | 0.34 | 0.10 | 0.15 | 0.81 | 1.45 | 0.41 | 0.53 | 1.30 | 0.29 | |
| Anger | 0.00 | 0.00 | 0.06 | 0.17 | 0.50 | 1.03 | 1.12 | 1.55 | 2.45 | 0.08 | |
| Sadness | 0.06 | 0.17 | 0.18 | 0.37 | 1.18 | 2.13 | 0.12 | 0.23 | 1.90 | 0.15 | |
| Fear | 0.43 | 1.05 | 0.06 | 1.17 | 0.75 | 1.38 | 0.00 | 0.00 | 1.28 | 0.30 | |
| Attention | 4.42 | 0.59 | 4.75 | 0.76 | 3.92 | 1.36 | 5.07 | 0.62 | 2.42 | 0.08 | |
| Direction | 4.33 | 0.83 | 4.66 | 0.94 | 4.08 | 1.42 | 5.04 | 0.78 | 1.31 | 0.29 | |
| Concentration | 4.56 | 1.01 | 4.87 | 0.87 | 3.68 | 1.38 | 5.12 | 0.58 | 3.10 | 0.04 | |
| Imagery | 3.90 | 1.18 | 3.06 | 1.33 | 3.25 | 1.90 | 4.28 | 0.96 | 1.33 | 0.28 | |
| Amount | 4.25 | 1.19 | 3.75 | 1.73 | 3.37 | 2.20 | 4.43 | 1.11 | 0.71 | 0.55 | |
| Vividness | 3.56 | 1.20 | 2.37 | 1.33 | 3.12 | 1.66 | 4.12 | 1.15 | 2.38 | 0.09 | |
| Self Awareness | 3.70 | 1.51 | 4.33 | 0.85 | 4.33 | 1.11 | 2.91 | 1.59 | 2.13 | 0.11 | |
| Altered Awareness | 3.45 | 1.83 | 3.25 | 1.53 | 2.29 | 1.08 | 4.16 | 1.40 | 2.16 | 0.11 | |
| Arousal | 1.18 | 1.66 | 0.68 | 0.70 | 1.25 | 1.03 | 0.50 | 0.80 | 0.88 | 0.46 | |
| Rationality | 4.29 | 1.13 | 3.79 | 0.88 | 3.74 | 1.17 | 3.91 | 1.30 | 0.38 | 0.77 | |
| Volitional Control | 3.04 | 1.44 | 2.91 | 0.70 | 2.75 | 1.44 | 2.00 | 1.43 | 1.03 | 0.39 | |
| Memory | 4.70 | 0.90 | 4.24 | 0.75 | 4.87 | 1.55 | 3.75 | 0.77 | 1.86 | 0.15 | |
| Internal Dialogue | 1.31 | 1.28 | 1.87 | 1.94 | 2.37 | 1.99 | 1.00 | 1.28 | 1.08 | 0.37 | |
| Reliability | 1.05 | 0.56 | 0.97 | 0.60 | 1.12 | 0.82 | 0.92 | 0.41 | 0.16 | 0.92 | |

The analysis of variance on the single scale of the subjects' experiences and the six scales of the hypnotists' experiences showed no significant differences. This means that the simulator subjects could not be identified even by the method of "classical content analysis", in fact, it was them who reported the most experiences of an altered state of consciousness (although the difference between them and the other groups did not reach statistical significance). The case is similar in the hypnotists: There was no difference in the scales developed for the analysis of the hypnotists' experiences as a function of the subjects' group status (simulator or any group of real subjects).

- c.) Analysis of experiences at the *level of words*: The verbatim transcript of the experiences of the subjects and those of the hypnotists assessed in the course of PEAT constituted the two textual databases for analysis. Version 2.1 of TACT (Textual Analysis Computing Tools) program served for counting the frequency of all words.

Content-categories were formed on the basis of the arising word list. The system of categories was based on the words of all of the experience-reports. In doubtful cases, the KWIC (Key Word In Context) function was used to identify the meaning of the given word (e.g., whether the word "here" referred to place or time).

The words that proved to represent the given category the best were categorized into the different categories by the evaluations of two independent judges. Using the arising system of categories, the experiences of the subjects and those of the hypnotists were analyzed separately. The system of categories is shown in Appendix XII.

The analysis of the individual experiences was performed by the computer. In order to make the reports of different lengths comparable, both the extensiveness of the individual categories and the number of categories covered by the report were compared to the length of the report.

According to the factor analysis on the TACT categories regarding the experiences of the subjects, the first six factors explained 74% of the variance (Cronbach alpha .75), including 15 of the 24 items of the category system.

Based on the factor analysis, the following six scales were developed (the names of the categories included in the given scale are listed after the names of the scales):

- **Unaltered state of consciousness:** Subject can, Subject control, Subject says
- **Waking ambivalence:** Certain, Positive, Uncertain, Altered state of consciousness (with negative load)
- **Malady:** Negative, Hurts
- **Involvement:** Archaic, Subject feels
- **I and He/She:** Self, About hypnotist
- **Temporal, justification:** Temporal order, Justification

Analysis of variance on these scales by the four groups of subjects showed a significant difference only in the "Malady" scale. The comparisons by Scheffé's method revealed that the highly susceptible subjects had significantly more remarks on this scale than the low susceptible subjects.

According to the factor analysis on the TACT categories regarding the experiences of the hypnotists, the first six factors explained 75% of the variance (Cronbach alpha .82), including 21 of the 33 original items of the category system.

The subscales developed on the basis of these factors (and their contents) were as follows in the cases of the hypnotists' experiences:

- **Evaluates:** Subject's gender, Positive remarks about subject, Disappointment, Professional (with negative load)
- **Concentrates:** Hypnotist pays attention, Hypnotist's monitoring control, Hypnotist says
- **Plans, controls:** Hypnotist plans, Hypnotist control, Justification (with negative load)
- **Dominates:** Hypnotist thinks, Hypnotist helps, Bodily (with negative load), Hypnotist does not pay attention (with negative load)
- **No interaction:** Asynchrony, Negative (with negative load), Self (with negative load)
- **Joint altered state of consciousness:** Subject's altered state of consciousness, Uncertain (with negative load), Hypnotist's altered state of consciousness (with negative load), Interesting and important (with negative load)

The analysis of variance of the average scores on these six scales of the hypnotists' experiences showed no significant differences with respect to the four groups of subjects (for detailed results see Bognár, Varga, et al., 2000, 2002).

12.3. DISCUSSION

The above analyses of experiences provided an opportunity to reveal whether or not it is possible to simulate the experience of hypnosis, and whether or not it appears in the hypnotist's experiences with whom they interacted with at four levels: Paper-and-pencil tests were administered, free reports were subjected to global analysis, to classical content analysis (by six aspects), to computer analysis using content-categories starting from the level of words.

Our results show a clear picture: The experience of hypnosis can be simulated, provided the instruction to simulate extends to the period of reporting subjective experiences. Simulators can report experiences – either in paper-and-pencil tests or in oral free reports – so that these reports cannot be differentiated from those of real subjects; and these reports can be even “better” than the real ones (i.e., “overacting” their role). Similarly: No significant differences were found as a function of the status of the subjects (i.e., simulators or real subjects).

Nevertheless, the judges working with the experiences directly, could identify several instances where there were some signs in the hypnotists' report that showed that there appeared some kind of a suspicion in them, that some kind of a doubt arose in the hypnotists that was difficult to put into words, a feeling that something was not right; for example (Bognár, 1998, pp. 42-43):

“I was worried to see if this was not some kind of acting that he was doing... it could not have been acting (H4/14)

“All the time, I felt a kind of ambivalence that once appeared, and then disappeared...” (H1/32)

“... Well, the signals I got from him regarding where he was in his hypnosis and the ... errr ... hypnotic performance as measured in scores were not in synchrony in my head, but ran separately from each other...” (H1/32)

“... as if his verbal communication and the felt experiences, and his meta-communication were not quite in synchrony for me...” (H1/9)

“I could not figure out what kind of communication this was... Well, it signaled something... His eyelids fluttered a lot... I could not decipher the message of his swallowing...” (H1/9)

“It was mainly at the introductory part, and at the end, at the report of experiences, that his signals were paradoxical” (H1/9)

“... well, that there was some disturbance here... (H2/2)

“... bodily, I could see that he was in deep hypnosis, but when he started to talk, that voice was not that which came from deep within, so, I had the impression that his voice is completely normal...” (H3/12)

“... I have a hidden impression that he is not very much in hypnosis...” (H3/16)

In addition, *overacting*, typical of simulators, also appeared in the experiences of the hypnotists. For example:

“... when he talked about his own experiences, he had no real words for it, ... but now, at this curtain, he was so elaborate, the ruffles, the shades, and so on... Well, he functions interestingly...” (H1/9)

“... I was surprised by this curtain hallucination; this bears witness to a very intensive, deep experience..., ... an absolutely lively experience...” (H3/12)

“... and he was the first one to put the diacritic to the wrong place, and he did cross the letter ‘t’, but crossed it above...” (H4/31)

These quotations indicate that the hypnotists definitely felt some kind of lack of synchrony, ambivalence, paradox signals, and confusion. The question arises why they did not appear at any of the four levels of analysis of the experiences. It is possible that the relatively small sample size prevents the appearance of statistically significant differences. On the other hand, it is also possible that the positive contents in the other parts of the hypnotists’ experiences and these signs of confusion blur the effects of each other.

The latter interpretation is supported by the fact that *the whole of hypnotists’ reports of experiences* in the case of simulators was not consistent. The hypnotists’ reports regarding the very same subject included contradictory contents; for example (Bognár, 1998, pp. 42-43):

“... somehow I was certain, I knew he was there...” and a few pages later: “... that maybe he is not deep enough in it... (H4/14)

“... well, how deep he is in hypnosis, it fluctuated for me very much...” and a little later: “... but at the age regression, for example, I had the feeling that he was very deeply in it...” (H1/32)

“... he appeared to be very childlike to me, as he said it..., ... as a small child, as he formed the letters meticulously, his letters were so fragmentary, well, really, he worked as a child with it...” and six lines later: “... he appears to be so strange..., ... his signals seem to be about something else to me...” (H1/9)

“... well now, here his voice is like in age regression, but before, when he talked, I did not get the feeling from his voice that he would be in trance...” (H3/12)

“I felt him to be quite hypnotizable...” and a few pages later, on the other hand: “... well, this is not so much a regressed writing...” and then “...he is not in a deep hypnosis, thus, it is fluctuating, it is fluctuating, but he is not so nicely in it” (H3/16)

“This is not trance-logic. Well, OK, I understand his intentions, that he cannot see it for the claret-colored curtain, but it is not hypnotic” and ten lines later: “Well, I have the impression that he would be a very hypnotizable boy, if we did not give him these suggestions...” (H3/16)

“Somehow, I was sure, I knew he was there, that he was in the good place...” and four line later: “... it occurred to me that he was not deeply enough in it...” (H4/14)

It must be noted that the research by Whitehead, Noller, and Sheehan (2008) also identified contents that showed the hypnotist’s suspicion that the subject only acted being under hypnosis (this study did not use simulators). In fact, they also gave many examples of that fact that the very same event (e.g., the subject referred to the smell of the classroom at the age-regression suggestion) was interpreted by the very same hypnotist differently in two different subjects.

Perhaps the small sample size of the study (SZIA) shown in this section, and especially the very moderate number of simulators may have prevented the hypnotists’ indications of the contradictions, ambivalence, and paradoxical signs regarding the simulators to reach the level of statistical significance in the cited analyses. Nevertheless, we can see here at the level of experiences a similar phenomenon as that described by Orne (1969, 1970, 1971, 1972, 1973) with respect to the behavior of the simulators. If an onlooker knows who the simulator is, he will spot thousands of signs of simulation. If the onlooker does not know this information, his analysis will not reveal this, either. Since our coders were blind to this aspect, they did not identify as many signs of simulation – either in the subjects or in the hypnotists – as to reach the level of statistical significance.

All in all, it can be concluded from this grandiose work that not only behavioral reaction, but experiences characteristic of hypnosis can also be simulated. Giving further thought to it, it is evident that the phase of assessment of experiences in the experiment also had those demand characteristics that oriented the subject in the main phase of the experiment. In spite of working with PEAT, the methodologically most demanding procedure in the field, that allows for no emphasis on any topic or content, every report of experiences depends on a person, and the simulators exhibited experiences that could not be differentiated from those of real subjects, even if they were small in number.

Therefore, of the warnings of Orne (1959), we must keep in mind at least one, namely, that we cannot say it with certainty about the experiential reports received by these methods that they were produced by the direct effects of hypnosis, because they may have arisen as a result of demand characteristics. At the same time – also keeping in mind Orne’s warnings – it is important to see that the fact that something can be simulated (let it be experience or behavior) – does not mean that the same phenomenon does not occur genuinely, too. Orne’s everyday example is sleep: It can be simulated, but it is our everyday experience that it exists in reality, too.

CHARACTERISTICS OF THE HYPNOTIC INTERACTION AS COMPARED TO OTHER DYADIC SITUATIONS

Several studies have undertaken the task of describing the characteristics of hypnosis in light of the subjective experiences. The psychoanalytical theory of hypnosis by Nash (2008a) expects the following changes as part of topographic regression (p. 211):

1. Changes in thought processes in the direction of greater symbolic, primary-process mentation
2. Increased availability of affect
3. Fluctuations in how the body is experienced
4. Displacement and condensation in the relationship with the hypnotist
5. A disruption in the experience of the self and agency, such that ongoing experience and behavior is described as “happening by itself” with attenuated experience of volitional participation.

Rainville and Price (2003) collected data regarding the common phenomenological characteristics that are both sufficient and necessary for the feeling of being hypnotized from volunteers for a series of hypnosis experiments for 9 weeks. The twenty-one participants agreed on the following (p. 111):

1. A feeling of mental relaxation (a letting go of tensions or becoming at ease, not necessarily physical relaxation)
2. An absorbed and sustained focus of attention on one or few targets
3. A relative absence of judging, monitoring, and censoring
4. A suspension of usual orientation toward time, location, and/or sense of self
5. One’s own responses are experienced as automatic (i.e., without deliberation and/or effort)

These studies, naturally, concentrated only on the hypnotized subjects. The question arises, however, whether or not the hypnotic *interaction* can be differentiated from other

dyadic situations on the basis of the *experiences regarding the relationship*. Is there any characteristic in which hypnosis is different from other dyadic situations? In order to answer this question, we used the data from the DIH questionnaire.

The characteristics of various everyday dyadic situations were assessed by the DIH for several semesters; we were also able to use various, non-hypnotic laboratory dyadic experimental sessions.

13.1. METHOD

Volunteering students at the Institute of Psychology at Eötvös Loránd University were given an envelop with two DIH questionnaires and were asked to complete them in any situation in which they were in a dyadic interaction with anyone. The only condition for the nature of the interaction was that it had to last for at least thirty minutes.

The instruction printed on the envelope asked the participants to describe the nature of the interaction, but they did not have to give their names. The envelopes were distributed at our various university courses and within the framework of students' preparation of a research paper, asking the students to pass on the unopened envelop until it reached a dyad that was willing to complete the tests after some of the specified situations. The envelopes that came back were collected anonymously, so we have no data on who responded and after how many "passes" were there between the first students and the actual responders. In the experimental situations it was the experimenter who handed the tests to the members of the dyads; sometimes the same was true in the cases of everyday interactions, too.

The pilot study brought fourteen kinds of interaction; the present analysis was narrowed to the following, most frequent situations: *joint work* (88 dyads), *sexual encounter* (285 dyads), *dancing* (47 dyads), *sport activities between two people* (25 dyads), *joint relaxation* (41 dyads).

Furthermore, the following experimental interactions were also used: *Joint Rorschach Testing* (JRT, 128 dyads, see Chapter 10); *individual hypnosis sessions* where DIH was administered (387 dyads, including both standard and non-standard hypnosis experiments; see Appendix II); *Visual Imaginative Synchrony (VIS) experiments* (110 dyads, see Chapter 14 and Box 19 and 20 on VIS), and the waking interactions of *Hangol-6 experiment* (40 dyads, see Appendix II). The data of the subjects are shown in Table 13.1.

13.2. RESULTS

The data received in the different interactional situations are shown in Table 13.2 and in Figure 13.1.

The differences between the means of the different groups on the various subscales of DIH were analyzed; the results are shown in Table 13.3, including the significant results of pairwise comparisons with the effect sizes (Cohen *d*)

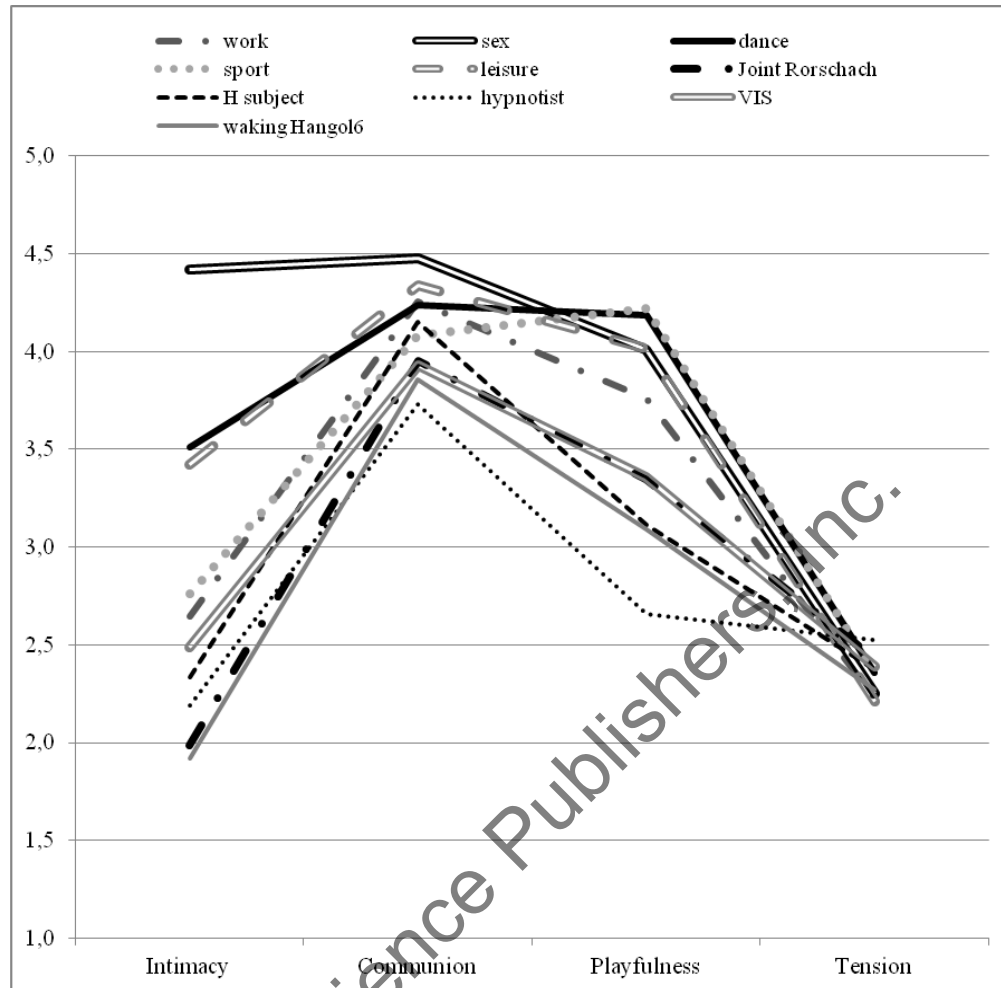
Table 13.1. Data of subjects in everyday and experimental interactions

| | Situations | Number of dyads | Male:female ratio | Average age (SD) years | Data collection | References |
|----------------------------------|------------------------------|------------------------|--|------------------------------|-------------------|--|
| Everyday interactions | Work | 88 dyads | 57:119 | 33.49 (12.09) | envelope | Bácsi (2011), Béleczki (2011) |
| | Szex | 285 dyads | 285:285 | 26.65 (7.12) | envelope | Józsa (2012a) |
| | Dance | 47 dyads | 47:47 | 27.88 (5.07) | personal | - |
| | Sport | 25 dyads | 24:16 and 6:4 | 30.45 (6.77) 25.20 (9.62) | personal envelope | - |
| | Leisure | 41 dyads | 30:52 | 27.30 (10.05) | envelope | - |
| Experimental interactions | Joint Rorschach | 128 dyads | 128:128 | 25.6 (3.7) | experimental | Varga, Józsa, Urbán (2002) |
| | Individual hypnosis | 387 dyads | 147:248 | 33.78 (14.43) | experimental | Varga, (2004a) |
| | Visual Imaginative Synchrony | 110 dyads | 62:62 26:22 (same 4 female experimenters) | 25.06 (7.15) | experimental | Csürös,(2011), Varga S., Varga, (2009a, b) |
| | Waking HANGOL-6 | 40 dyads | 20:20 | 24.78 (4.93) | experimental | Gösi-Greguss, Bányai, Józsa, Suhai-Hodász, Varga (2004a) |
| Total | | 1152 dyads, 2304 tests | | | | |

Table 13.2. DIH means and standard deviations of various everyday and experimental interactions. Letters next to the situations (a, b, c,...) are the same as in Table 13.3. Here are shown to make comparison of the tables easier. Hypnosis in bold

| Situations | | n | DIH Intimacy | | DIH Communion | | DIH Playfulness | | DIH Tension | |
|------------------------------|----------|------------|--------------|-------------|---------------|-------------|-----------------|-------------|-------------|-------------|
| | | | x | sd | x | sd | x | sd | x | sd |
| Work | a | 176 | 2.65 | 0.94 | 2.65 | 0.94 | 3.76 | 0.78 | 2.23 | 0.36 |
| Szex | b | 570 | 4.42 | 0.59 | 4.42 | 0.59 | 4.01 | 0.64 | 2.25 | 0.34 |
| Dance | c | 94 | 3.51 | 0.95 | 3.51 | 0.95 | 4.18 | 0.51 | 2.36 | 0.39 |
| Sport | d | 50 | 2.76 | 1.00 | 2.76 | 1.00 | 4.22 | 0.72 | 2.35 | 0.46 |
| Leisure | e | 82 | 3.42 | 0.94 | 3.42 | 0.94 | 4.02 | 0.70 | 2.21 | 0.36 |
| Subject | f | 387 | 2.34 | 0.71 | 2.34 | 0.71 | 3.11 | 0.80 | 2.37 | 0.35 |
| Hypnotist | g | 387 | 2.19 | 0.74 | 2.19 | 0.74 | 2.66 | 0.81 | 2.53 | 0.40 |
| Visual Imaginative Synchrony | h | 220 | 2.49 | 1.08 | 2.49 | 1.08 | 3.36 | 0.86 | 2.39 | 0.39 |
| Waking HANGOL-6 | i | 80 | 1.92 | 0.55 | 1.92 | 0.55 | 3.09 | 0.69 | 2.27 | 0.31 |
| Joint Rorschach | j | 256 | 1.99 | 0.64 | 1.99 | 0.64 | 3.35 | 0.72 | 2.43 | 0.36 |
| n= | | 2302 | | | | | | | | |

Source of data: Józsa, 2012b, with permission of the author.



Source of figure: Józsa, 2012b, with permission of the author.

Figure 13.1. Means of DIH subscales in various everyday and experimental situations.

13.3. DISCUSSION

As could be seen, the various situations can be differentiated along the Intimacy and Playfulness subscales of the DIH. Probably, the Harmony and Tension subscales are so close to each other, because all of our situations were based on “peaceful” cooperation, therefore, ceiling and floor effects are manifested in the former and latter cases, respectively.

It is noteworthy that all of the everyday situations were more “favorable” than any of the experimental situations in the sense that they scored higher on Intimacy and on Playfulness than the laboratory situations. The probable reason is that in the everyday interactions the participants were people who already knew each other and who, sometimes, were in intimate relationship with each other (plus, both partners were willing to complete the test for the sake of the study), while the laboratory situations were mostly standardized interactions between strangers.

Table 13.3. Comparison of DIH means of various everyday and experimental interactions (Kruskal-Wallis test) ** p<0.001

| Situations | | n | DIH Intimacy | DIH Communion | DIH Playfulness | DIH Tension |
|------------------------------|----------|------------|---------------|----------------|-----------------|----------------|
| Work | a | 176 | 1036.54 | 1285.72 | 1366.19 | 933.70 |
| Sex | b | 570 | 1925.12 | 1545.61 | 1570.66 | 970.82 |
| Dance | c | 94 | 1506.19 | 1210.97 | 1712.29 | 1138.53 |
| Sport | d | 50 | 1091.32 | 1103.39 | 1741.83 | 1070.75 |
| Leisure | e | 82 | 1447.54 | 1395.65 | 1580.34 | 805.68 |
| Subject | f | 387 | 876.79 | 1157.85 | 872.62 | 1199.85 |
| Hypnotist | g | 387 | 773.40 | 772.25 | 590.34 | 1449.26 |
| Visual Imaginative Synchrony | h | 220 | 919.93 | 952.42 | 1067.89 | 1196.91 |
| Waking HANGOL-6 | i | 80 | 600.56 | 830.98 | 845.44 | 989.29 |
| Joint Rorschach | j | 255 | 640.88 | 920.76 | 1044.61 | 1318.96 |
| Kruskal-Wallis H (df=9) | | | 1247.424** | 416.144** | 758.814** | 189.127** |

Note: List of significant comparisons (following Bonferroni-Holm corrections). Letters indicate the situations (see Table 13.2.). Effect size (Cohen d) is in upper index. Hypnosis is in bold.

Intimacy: a<b^{2.31}; a<c^{0.91}; a<e^{0.82}; a>f^{0.38}; a>g^{0.55}; a>i^{0.98}; a>j^{0.84}; b>c^{0.48}; b>d^{2.09}; b>e^{1.31}; b>j^{3.95}; b>f^{3.20}; b>g^{3.35}; b>h^{2.31}; b>i^{4.39}; c>d^{0.77}; c>j^{1.91}; c>f^{1.41}; c>g^{1.56}; c>h^{1.00}; c>i^{2.12}; d<e^{0.68}; j<f^{0.52}; j<g^{0.29}; j<h^{0.58}; f>g^{0.21}; f>i^{0.67}; h>i^{0.70}

Communion: a<b^{0.38}; a>g^{0.78}; a>h^{0.49}; a>i^{0.66}; a>j^{0.51}; b>c^{0.36}; b>d^{0.67}; b>j^{0.98}; b>f^{0.59}; b>g^{1.22}; b>h^{0.91}; b>i^{1.15}; c>j^{0.41}; c>g^{0.66}; c>h^{0.41}; c>i^{0.54}; j<f^{0.34}; j>g^{0.34}; f>g^{0.63}; f>h^{0.34}; f>i^{0.49}; h>g^{0.28}

Playfulness: a<b^{0.35}; a<c^{0.65}; a<d^{0.61}; a<e^{0.35}; a>f^{0.82}; a>g^{1.38}; a>h^{0.49}; a>i^{0.91}; a>j^{0.55}; b<d^{0.31}; b>j^{0.97}; b>f^{1.25}; b>g^{1.86}; b>h^{0.87}; b>i^{1.38}; c>j^{1.35}; c<f^{1.63}; c>g^{2.30}; c>h^{1.20}; c>i^{1.82}; j>f^{0.32}; j>g^{0.90}; f>g^{0.56}; f<h^{0.30}; h>g^{0.84}; i>g^{0.57}

Tension: a<f^{0.39}; a<g^{0.79}; a<h^{0.43}; a<j^{0.56}; b<j^{0.51}; b<f^{0.35}; b<g^{0.76}; b<h^{0.38}; c>e^{0.40}; c<g^{0.43}; c>i^{0.26}; i<g^{0.48}; f<g^{0.43}; f>i^{0.30}; g>h^{0.35}; g>i^{0.73}

The evaluations of the participants of the hypnotic interaction (hypnotist and subject) about the interaction differed from each other significantly on all the subscales: Considering effect sizes, too, we can say there is not much difference in intimacy, but the hypnotized subjects rated experimental hypnosis interactions as higher in intimacy, playfulness, and slight tension as compared to the hypnotists.

According to the hypnotists' responses, "hypnotism" is the least playful situation, accompanied by the least harmony and the greatest tension. Its intimacy is surpassed by only the situations of the Joint Rorschach Test and the Visual Imaginative Synchrony slightly. These values show that this situation may mean different thing to the participants of the hypnotic interaction: While hypnotism (the act of inducing hypnosis) is an activity that requires great responsibility and concentration, hypnosis for the subject brings a relatively high level of intimacy and playfulness and an especially high level of harmony.

On the other hand, hypnotic interactions do not seem to be outstanding among the other dyadic relationships; they are found within the range of the other experimental interactions. This means that hypnosis – or at least experimental hypnosis – is not outstandingly high in intimacy or harmony; the participants evaluate it similarly to other standardized laboratory situations. If you recall Nash's theory (Nash, 2008a), his fourth point was related to the

experiences characteristic of the relationship itself: Attitudes toward the “significant others” may be displaced and condensed in the relationship with the hypnotist. We have found no sign of this in the indices of DIH.

As an interpretation, we may say that the early relational patterns do not come to the surface (are not manifested) during hypnosis, rather, the situation itself may only *create an opportunity* for opening the internal representation of the relationship patterns within the framework of a relatively cool interaction – if we rely on how the participants evaluate the interaction itself.

What kind of experiences may lie under the surface is shown in Chapter 11 and in Chapter 16. These free reports of subjective experiences demonstrate that in addition to the “well-combed” orderliness of the given interaction, significant emotional involvement may appear in the participants, especially in the cases of certain hypnosis styles.

BOX 18. THE APPLICATION OF DIH TO CHARACTERIZE VARIOUS INTERACTIONS

DIH has been administered for the characterization of various relationships in several studies. Thus, it became possible to study the profiles of the different interactions.

Béleccki (2011) studied everyday interactions in 83 dyads, also recording the kind of relationship the respondents were in and some other characteristics. It is noteworthy in the results (see Table box18.1.) that when she analyzed the data by relationship types, that couple relationship scored the highest in intimacy, followed by sibling relationships and parent-child relationships (with much lower scores).

The scores on the Communion and Playfulness scales are more even across the relationship types; the differences between the highest scores in sibling relationships and the lowest scores in collegial relationships cause statistically significant F values in both cases. There is no difference in Tension among the relationship groups.

Table box 18.1. DIH subscale means and standard deviations, the results of ANOVA, and data of pairwise comparisons (*post-hoc* analysis showed statistically significant differences between the groups indicated by letters *a, b, c, d, and e*) (based on Béleccki, 2011)

| | Couple (<i>a</i>) mean (sd) | Friends (<i>b</i>) mean (sd) | Parent- Child (<i>c</i>) mean (sd) | Colleagues (<i>d</i>) mean (sd) | Siblings (<i>e</i>) mean (sd) |
|--------------------|--|---|---|--|--|
| Intimacy | 4.04 (0.72) <i>b, c, d, e</i> | 2.64 (0.71) <i>a</i> | 2.78 (0.57) <i>a</i> | 2.26 (0.57) <i>a, e</i> | 3.23 (0.35) <i>a, d</i> |
| Communion | 4.53 (0.42) | 4.52 (0.47) | 4.51 (0.58) | 4.25 (0.58) <i>e</i> | 4.80 (0.23) <i>d</i> |
| Playfulness | 4.04 (0.60) | 4.06 (0.68) | 3.93 (0.93) | 3.56 (0.93) <i>e</i> | 4.44 (0.46) <i>d</i> |
| Tension | 1.48 (0.61) | 1.48 (0.57) | 1.21 (0.62) | 1.61 (0.62) | 1.05 (0.11) |

Comparison of respondents who have siblings with those who have none, respondents with siblings reported greater Communion and Playfulness in the subscales of DIH. As to the genders, there was a difference only on the Intimacy scale, in the expected direction: intimacy was greater in opposite-sex pairs than in same-sex pairs (see Table box18.2.).

Depending on the duration of the relationship, DIH brought interesting differences again. Relationships with a history of longer than 100 months were characterized by greater Intimacy, Playfulness, and Tension scores. It is important that Communion does not decrease significantly with the passage of time (see Table box 18.2.).

Table box 18.2. Means, standard deviations, z-scores, and the level of significance of the Mann-Whitney U tests as a function of having siblings, of the gender-composition of the pair, and of the duration of the relationship (* p<.05, ** p<.01, * p<.001) (based on Béleccki, 2011)**

| | Has sibling mean (sd) (n=137) | No sibling mean (sd) (n=29) | z-score | Same-sex partner mean (sd) (n=58) | Opposite-sex partner mean (sd) (n=108) | z-score | 5-100 months mean (sd) (n=46) | 101-369 months mean (sd) (n=44) | z-score |
|--------------------|----------------------------------|--------------------------------|---------|--------------------------------------|--|---------|----------------------------------|------------------------------------|---------|
| Intimacy | 3.50 (0.97) | 3.28 (1.03) | -0.951 | 2.62 (0.63) | 3.91 (0.81) | 8.093** | 4.28 (0.62) | 4.00 (0.58) | -2.513* |
| Communion | 4.54 (0.46) | 4.38 (0.44) | -2.184* | 4.49 (0.51) | 4.53 (0.44) | -0.218 | 4.59 (0.36) | 4.49 (0.45) | -0.803 |
| Playfulness | 4.07 (0.67) | 3.70 (0.61) | -2.761* | 3.97 (0.73) | 4.02 (0.64) | -0.389 | 4.2 (0.57) | 3.93 (0.57) | -2.167* |
| Tension | 1.41 (0.54) | 1.50 (0.73) | -0.957 | 1.37 (0.54) | 1.46 (0.60) | -1.300 | 1.37 (0.48) | 1.63 (0.72) | -2.424* |

Lefánti (2011) administered DIH to women giving birth to their first child with or without a doula. In this study, the test referred to the general experiences during delivery, rather than to a specific interactional partner.

According to the results (see Table box18.3.), women giving birth with doulas gave higher scores on Communion and Playfulness and lower scores on Tension with respect to their delivery.

Table box18.3. DIH values and the levels of significance of the Mann-Whitney U test (* p<.05, ** p<.01, * p<.001) (based on Lefánti, 2011)**

| | Women delivering with doulas mean (sd) (n=21) | Women delivering without doulas mean (sd) (n=45) | U |
|--------------------|--|---|---------|
| Intimacy | 3.83 (0.73) | 3.26 (0.94) | 291.0* |
| Communion | 4.50 (0.60) | 3.95 (0.89) | 256.0** |
| Playfulness | 3.77 (0.92) | 2.93 (0.98) | 241.5** |
| Tension | 2.19 (0.73) | 2.88 (0.99) | 273.5** |

Nova Science Publishers, Inc.

PART IV: INTERACTIONAL SYNCHRONY AT THE EXPERIENTIAL LEVEL

INTRODUCTION

In this part, we will arrive at a key point of the book, namely, to the empirical approach of a previously emerging theoretical possibility, that is, if it is possible to talk about interactional synchrony at the level of subjective experiences, too.

We will discuss the topic of imagery as an apparent deviation, but the emphasis of our line of thinking will be on the issues that mental imagery can be extremely *realistic* for the hypnotic subject or patient, and that the *joint activity* of *imagination* and the *verbal* channel provides an opportunity for the hypnotic suggestions to form the experiences of the patient or subject. Building on this, we will examine the possibility of synchronization at the level of imagery – this topic will gain greater importance later, in Part VI – and will show the ways we tried to grasp the various possibilities of harmony between experiences.

Nova Science Publishers Inc.

Nova Science Publishers, Inc.

IMAGINATION AND HYPNOTIC INTERACTION

Traditionally, one of the key elements of hypnosis is mental imagery, or the ability to be involved in imagination (J. Hilgard, 1979). Yet the research studying this relationship yielded the initially unexpected finding that hypnotic susceptibility and imagery are not correlated highly, either if the person evaluates his/her own imaginative performance, or if it is measured by several tasks of imagination generated by a computer (see, e.g., Kogon, Jasiukaitis, et al., 1998). According to one of the explanations, it is possible that the relationship is simply not linear. The so called “missing quarter” hypothesis was put forward: Those who have vivid imagery may be of any hypnotic susceptibility, but those who are low in imagination, will certainly not be highly hypnotizable. Kihlstrom (2008) also argues that the relationship between mental imagery and hypnotizability is rather vexed, and says we certainly cannot narrow hypnosis down to mental imagery.

It was also raised that imaginative activity is not decisive in itself. There are people who experience hypnotic phenomena by way of imagination, others by way of dissociative or amnesic processes, for still others, expectations and favorable attitudes may be decisive (Barber, 1999; Perry, 2004). These mechanisms may be linked to each other as well. Imaginative involvement in hypnosis usually goes together with high absorption, that is, the person is deeply involved in the vivid, realistic imaginary situation. This involvement may become even deeper with focused attention and/or dissociative ability, because filtering out the external or internal distracting stimuli may lead to greater involvement in the imaginary content.

14.1. IMAGINATION IN HYPNOTHERAPY

The committee examining the practice of Mesmer came to the conclusion that healing was only the result of imagination. This originally degrading conclusion can be interpreted positively, too, as did Charles d’Elson (cited by Rhue, Lynn, and Kirsch, 1993, p. 5): “If treatment by the use of imagination is the best treatment, why do we not make use of it”?

Indeed, according to Freud’s “topographic regression” concept, during regression typical of hypnosis, there is a transformation from thoughts to sensory experiences. In other words, the ideas appear in *images* (Nash, 2008). This topographic regression is in the center of

Nash's own psychoanalytic theory of hypnosis, and accordingly, he considers imagery as a key factor in hypnosis.

Certainly, there are many examples that methods built on imagination can well be applied in clinical work. Milling and Costantino (2000) think that they bring stronger involvement and are more interesting than simple techniques that just divert attention. Imagination is a key element in several techniques of hypnotherapy (Rue, Lynn, and Kirsch, 1993), which is admitted even by those who reject the idea of hypnosis being a specially altered state of consciousness (Kirsch, 1993). Some examples:

- “Imagery is a prominent characteristic of self-hypnosis as well as heterohypnosis” (Eisen, 1993, p. 141; see also Fromm, Brown, et al., 1981; Fromm, Lombard, et al., 1987-88; Lombard, Kahn, and Fromm, 1990).
- In hypnosis, the patient, by pressing the control function of the ego into the background, may visualize his anger, may picture it in its raw form, or may vent it (Eisen, 1993). This way, he can reach the effect of actual performance and venting just by way of imagination.
- “What is memory anyway, except imagination?” – told Stephen Lankton to one of his sexually and physically abused clients, raising the possibility of working through the painful memory this way (Matthews, Lankton, and Lankton, 1993, p. 201).
- Brown concludes in his comprehensive study on the therapeutic use of metaphors: “Metaphor changes understanding by providing strong *images* that serves as a matrix for organizing experience and by revealing the limitations of current patterns of thinking, feeling, or behavior” (Brown, 1993, p. 305, emphasis added).
- Weisenberg (1998), citing the summary of the meta-analysis of coping strategies used in the relief of pain, arrives at the conclusion that two of the six categories in the system seem to be the most effective, those that build on imagery – *neutral* and *pleasant* imageries – as opposed to the other four categories (external focus of attention, reconstructing the context of nociception, rhythmic cognitive activity, and the acceptance of pain).
- In children, imagination (fantasy) and reality may merge almost completely. In their cases, there is no need to “indicate” by various rites or other methods that now we are in imagination rather than in reality. This can be used in the hypnotherapy with children excellently (Kohen and Olness, 1993; Kuttner, 1988).
- Those difficult and unbearable emotions whose abreaction is impossible even in the “reality” of hypnosis can be vented in imagination. Helen Watkins’ (1980) “silent abreaction” technique is a nice example of this.

As we can see, “image” is not a simple cognitive ability that occasionally occurs in the course of hypnosis or therapy. Imagery is a *key momentum* through which the road may lead to the modification of thinking, behavior, and feelings. So imagery can be purposefully used in many therapeutic situations.

The effectiveness of hypnosis, placebo, and suggestion without hypnotic induction was compared by Spanos and colleagues (Spanos, Stenstrom, and Johnston, 1988) in the treatment of warts. In the “hypnosis” situation, only a two-minute induction procedure was administered, after which another two-minute series of suggestions were given. The

suggestions regarded the tingling, numb, and warm feeling of the skin around the warts, and also said that the warts will shrink more and more, and will eventually fall off. The patients were asked to *actively imagine* this whole process. The suggestion group received the same suggestions, but without the hypnotic induction. The warts of the placebo group were treated by a “cold laser”-(pseudo)device that emitted red light and different sounds. The results showed that both hypnosis and suggestions were more effective in clearing away the warts than the placebo or control without treatment. No relationship was found between the hypnotizability of the persons and the effectiveness of the treatment, or between the *general* vividness of imagery of the persons and the success of treatment. However, there was a strong correlation between the effectiveness of treatment and a) how vividly the patient could imagine the images *related to the treatment* ($r=.58$, $p<.01$), b) how vivid the feelings proposed by the suggestions appeared to the patients ($r=.54$, $p<.05$). To sum it up: Although *general* vividness of imagery did not show a correlation with the success of the treatment, vividness of imagery arising *in the given situation* did.

In the treatment of phobias, desensitization or flooding may take place so that the patient imagines the fearful situation – all this embedded in hypnosis, of course. The vividness and realistic nature of imagery appearing in hypnosis promotes therapeutic change (Crawford and Barabasz, 1993); furthermore, all this takes place under protected circumstances and “logistically” much more simply than real, in vivo application. It is especially interesting that the accompanying psychophysiological phenomena of the situation set “purely” by the aid of imagination (in hypnosis) made more exact identification of stimulus-hierarchy possible than the hierarchy revealed in the course of the original systematic desensitization. In an 11 year old girl with school-phobia imagining “entering the gate of the school” resulted in the greatest vegetative arousal (skin-conductance response and peripheral pulse volume), although this momentum was one of the least disturbing ones according to the earlier, traditional measurement. This indicates that imagination gives a more “exact” picture of the feeling regarding the fearful stimuli than the traditional method of systematic desensitization.

However, the effect achieved under hypnosis in the desensitization sessions could easily be generalized to real life situations by posthypnotic suggestions. Thus, the reality of imagination was proven in this sense, too.

The reality of the imagination drawn by the hypnotic suggestions can well be seen in Strauss’ (1993) example, who worked with a woman hospitalized for depression. Since the woman was just expecting a baby, she could not take her medication to relieve her depression. Strauss gave suggestions of taking regular Valium pills, and thus the symptoms were really relieved by this *imaginary* medication. Furthermore, they also switched to a new medicine (Elavil) – in imagination, of course – the woman had already heard about, but had never had the opportunity to try it. This was also “effective”.

Alden and Heap (1998) also reported the effectiveness of an imaginary nerve-block injection. As a result of an injury to her foot in an accident, a woman received a course of nerve-block injections to treat her chronic pain of 20 years. Once, the woman remarked that she can no longer even imagine what it feels like to have a pain-free foot. Hypnosis was recommended to revive the pain-free body experience. This was successful, but only if the nerve-block was also “injected” in her imagination. This imaginary injection brought about the favorable changes (including being able to walk on her foot without any pain) just as long as the real injection. The same author also reported about a terminally ill patient whose pain

could not be relieved by medicines sufficiently. He reported the spontaneous *image* of the pain in hypnosis that he felt as if small people hit him with hammers from inside. He received the hypnotic suggestion to put some soft cover on the hammers. This modification in the image decreased the patient's pain on a ten point scale from 8 to 0.

Rosén, Willoch et al. (2001) made neurophysiological (PET) measurements in 2 patients suffering from phantom pain while the patients had to imagine painful and comfortable positions and movements of the missing limb. The recordings matched the imagined movements (SM1: primary sensorimotor cortex and SMA: supplementary motor area) and the level of pain (anterior gyrus cinguli and thalamus). The brain areas responsible for the execution of the movement and for the sensory processing were active in all conditions. The anterior gyrus cinguli and the thalamus, however, showed increased activity only when the imaginary conditions were accompanied by pain, which was related to the pain-ratings of the patients. This study showed convincingly that phantom-feeling and phantom-pain is "real" in the sense that these experiences are accompanied by the increased activity of the appropriate brain areas. It was another interesting finding that the imaginary manipulation applied in the phantom-feeling also resulted in parallel patterns in the neurophysiological recordings and the subjective pain-ratings. Imagining a more comfortable position really decreased the activity of the brain areas responsible for the unpleasant evaluation of pain, while the shift of position itself could be followed in the motor and sensory areas.

Talking about the hypnotherapy of psychotic patients, Murray-Jobsis (1993) described the so called *renurturing* technique: The patient may re-live in hypnosis as his mother rocked him, looked at him, smiled at him, as held him securely. Regardless of the fact that both the therapist and the patient know that the historical situation was not like that, the subjective reality of the feelings elicited by the scenes depicted in hypnosis can be corrective, and although it does not change the past, it may have a favorable effect on both the present and the future. She also talked about a method in which the patient – upon the suggestion of the therapist – closed his extremely difficult feelings he could not talk about even to his therapist into an imaginary box and could put it away until he wanted to deal with them again.

Imagination provides an opportunity to "experience" a future situation, reinforcing the motivation to achieve the desired goal this way. An example of this is when overweight patients see themselves in guided or spontaneous imagery in the future as pretty, eating the right foods and successfully rejecting the wrong ones, etc. (the techniques of "end-result imagery" or "future-mirror"; see Levitt, 1993).

Thus, imagination is not simply something that can be realistic, but it may provide genuine experience even *as opposed to reality or anticipating it*.

14.2. IMAGINATION IN AN INTERACTIONAL APPROACH

The "reality" of imagination in hypnosis was perhaps the most tangibly demonstrated by the study of Kosslyn, Thompson, et al. (2000). In this study, highly hypnotizable subjects were shown identical patterns (made up of rectangles of a various sizes) in color and gray tone. The task of the subjects was to "color" the grey pattern or to drain color from the gray pattern in their imagination. The hypnotic and imagery conditions were alternated in the experiment, and the brain activity of the subjects was monitored by PET. The study clearly

showed that during the imagery alone condition the brain areas that were responsible for color were more active and in accordance with the direction of the suggestions (enhancing or diminishing color perception).

This study also demonstrated that the increased activity of the right hemisphere related to imagery per se was paired with the increased activity of the left hemisphere in hypnosis. Thus, a special possibility of hypnosis is beginning to be outlined: Hypnosis may associate verbally mediated processes to the increased imagery activity. This is the possibility where the hypnotist “enters” the process with his verbal suggestions, and he may elicit, modify, and shape the imagery processes of the patient/subject. Since the processes of imagination may be coupled with reality-like experiences, the suggestions of the hypnotist may elicit changes in the patient’s/subject’s subjective experience of reality.

This process often requires the hypnotist to attune to the patient/subject so much that his own processes of imagination also begin to set into motion (at least to some extent). We have found several examples of this under experimental conditions (Varga, Bányai, Gósi-Greguss, 1999, p. 188):

TRH (H2, A3): *“Here, I have the feeling, that I guard her, take care of her dream, and after a while I also began to fantasize... I imagined a sea, with waves good for surfing... why not to fantasize... I attend to her very much; I am taking care as well...”*

AAH Q (H6, S2/1) *“when I hypnotize, at the dream suggestion, my fantasy begins to work, I start to dream...”*

Similar phenomena in the therapeutic process are indicated by the “fictional” description of Diamond (2000), when he “speculated” (as he put it) about the experiences that the therapeutic intervention – described by Baker (2000) in order to illustrate his view on the hypnotic relationship – may have had on the participants. At one point, Diamond attributed the following experience to the therapist:

“We are together in this,” he thinks to himself while visualizing the very image he suggested to Sophia. (p. 82)

Out studies with Visual Imaginative Synchrony (VIS) demonstrate that we can get much closer to reality than this fictional speculation!

Balken, a French therapist reported that in a session where she was administering an age-regression suggestion, Aladdin’s lamp flashed to her in her imagination spontaneously, and a genie helped her toward the desired life event. Later, the patient reported that Aladdin’s genie also appeared to him on the road, opened the door, which lead him to his childhood (Balken, 2007).

Varga S. (2008, p. 270) reported her own therapeutic experiences where she had similar instances of special attunement with her patients. This is one of her examples:

Two years ago, a man in his early forties asked for therapeutic help for his anxiety. He had lost his parents to a car accident in his childhood, When we were working with his feelings related to the accident (where he was not present), I saw the event in my imagination. As if in a movie, I saw the events as they unfolded. I saw the steering wheel from the perspective of his father, I saw the wet windscreen, the road, the oncoming

truck, and as they “crashed into each other”. In hypnosis, the patient did not talk about the crash or the accident itself.

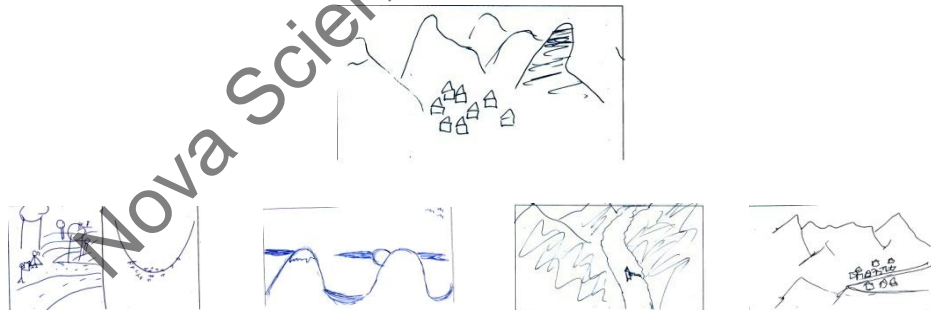
BOX 19. VISUAL IMAGINATIVE SYNCHRONY

The study of **Visual Imaginative Synchrony** (VIS) is related to the research by Katalin Varga S, this being the topic of her PhD thesis (Varga S., 2008, 2011; Varga S. and Varga, 2009a, 2009b, 2011). This phenomenon of interactional synchrony means a form of attunement in imaginative activity. The research was inspired by some instances of spontaneous accord in situations of therapy, where patient and therapist experienced the same or similar visual imagery.

The laboratory study of VIS aimed at finding out if VIS can be elicited under controlled circumstances, if imaginative activity can be reproduced in drawing and/or in descriptions, and if perhaps harmony can be judged by independent judges more reliably.

In order to elicit the phenomenon under controlled circumstances, words of motifs were used that proved to be moderate in their ability to elicit images with respect to *detail*, *verisimilitude*, and *stability* in preliminary measurements. These words were: TOWER, EARTH, BALL (formal gathering), WALK, VALLEY, SHIP, LANDSCAPE, ROAD, MUSIC, and AUTUMN. After saying it aloud, experimenter and subject inspected their arising internal images, then drew and wrote down (explained) what they had just seen in front of their mind’s eye on an empty, A4 size sheet of paper with a ball point pen. The emerging drawings and descriptions could thus become subjects of rating by independent judges.

VIS was identified by presenting the drawing of the subject in a motif together with four of the experimenter’s drawings to the same motif (one being the picture drawn simultaneously with the subject).



Three independent judges had to make similarity ratings (ranking the pictures) without receiving any clue as to what to base their judgments on. Re-testing the similarity ratings of the presence of VIS with three new raters and putting three new random pictures of the same motif next to the real one, we considered the case to be **real visual imaginative synchrony** if the given pair of pictures proved to be the most similar in re-testing, too. In the above illustration, the corresponding pair of the picture in the top row is the fourth picture in the bottom row.

As it turned out a few sessions later, the patient also watched what had happened in the car in that session. He said he saw the whole series of events from the perspective of his father, the steering wheel, the windscreen, the truck, and as they crushed into each other with a ghastly force...

On the basis of the above, the “absence” of statistical correlation between hypnotic susceptibility and imagination does not justify burying the role of imagination in hypnosis. Apparently, it is not essential for imagination measured one way or another to correlate with hypnotic susceptibility usually measured by behavioral performance.

It is much more important that imagination is extremely *realistic* in situations that are relevant and emotionally laden for the subject/patient, and that in hypnosis, the *joint activity* of *imagination* and the *verbal* channel provides an opportunity for hypnotic suggestions to shape the experiences of imagination of the patient/subject.

All this requires special attunement on part of the hypnotist, and the result may be that the two persons experience “common” visual imagery.

BOX 20. FINDINGS WITH VISUAL IMAGINATIVE SYNCHRONY

Visual attunement between the members of 48 dyads was studied with 5 stimulus words (i.e., 240 cases) in the waking state. In hypnosis, four hypnotists and five experimenters worked with 40 subjects in different category groups (the details of the experimental series Hangol-6 can be seen in Appendix II and Appendix II/b). The situations also included waking control, and instances when the “experimenter/hypnotist” left the room and VIS was administered by an independent experimenter. The experiments were conducted in a standard and relatively stimulus-deprived experimental chamber.

VIS could be identified in 22.9% of the dyads and in 5.4% of the cases. This means that about one fifth of the dyads produced VIS, and that the same dyad produced VIS in response to some motifs, but not to others.

There were four different experimental situations in the research including hypnosis: waking or hypnosis, with the experimenter being the hypnotist or an independent experimenter (who entered the experiment and replaced the hypnotist for this period). VIS appeared in the following proportions:

- In hypnosis, with the hypnotist: 23.8% of the dyads, 4.8% of the cases;
- In hypnosis, with the experimenter: 35.3% of the dyads, 8.3% of the cases;
- In waking, with the hypnotist: 33.3% of the dyads, 6.7% of the cases;
- In waking, with the experimenter: 11.1% of the dyads, 2.2% of the cases.

As can be seen, VIS is not specific to hypnosis, and it can be evoked with a new interactional partner; thus, it is not sensitive to the stability of the relationship. The appearance of VIS was not related to trait-like features (Vividness of Visual Imagery Questionnaire – VVIQ – by Marks, 1973; Reading from the Eyes Test by Baron-Cohen, Wheelwright, and Hill, 2001, aimed at measuring empathy), or to how the persons rated the quality of their own state of consciousness (as measured by PCI).

In the cases of dyads where VIS appeared in the *waking* state, the subjects characterized the interaction as less intimate, playful, and harmony and higher in eroticism, while the experimenter/hypnotist reported low level of dissociation.

In cases of dyads where VIS appeared in hypnosis, the subjects were found to report lower levels of negative archaic involvement, characterized the relationship with their interactional partner as higher in harmony, playfulness and lower in eroticism, while the experimenter/hypnotists reported low level of tension and eroticism, were less involved in the situation, were low in dependence need and were not afraid of negative evaluation. In hypnosis, VIS-positive cases were more typical between interactional partners of the opposite sex. The level of hypnotizability of either the subjects or the hypnotists showed no relationship with the appearance of VIS (see Varga S., 2008, 2011; Varga S. and Varga, 2009a, 2009b, 2011 for more details).

Different authors refer to the feelings, experiences, images, and imagery emerging in the therapist in the course of attuning to the patient by various names: unconscious communication, listening with the third ear, intuition, telepathy (Peebles, 2008).

Perhaps Visual Imaginative Synchrony (VIS) may be one of the examples where this seemingly mystic phenomenon can be produced and operationalized under laboratory conditions.

DEFINITION OF SYNCHRONY AT THE LEVEL OF EXPERIENCES¹

Looking for a relationship between the experiences of the participants of the dyadic interaction we noticed that there were characteristic patterns in the experiences related to each other.

For example, the joint analysis of the DIH data of subjects and hypnotists revealed that some of the dyads evaluated the preceding hypnosis session they had together almost identically. We called this situation *synchronous* type. In some other cases, the situation was reversed, that is, when one of the participants scored high, the other scored high, and vice versa. This situation was given the name *compensatory* type. Figure 15.1 illustrates these cases. The majority of the dyads, however, gave evaluations that were *independent* of each other, that is, no clear correspondence could be seen between the scores of the two participants (Varga, Józsa, et al., 2009).

In order to determine the degree of synchrony, we simply “translated” what is visible in Figure 15.2 into the language of mathematics: The members of the dyad sometimes gave values that are very close to each other; sometimes these values are very different. Thus, the degree of synchrony was quantified by subtracting the values given by the hypnotist from those given by the subject with respect to the very same session for each subscale of DIH. Negative values indicate that the hypnotist evaluated the given subscale higher than the subject. In case of this index of synchrony, we can use the absolute value of the difference – i.e., neglecting the information of who gave a higher value –, but we can use the raw difference, too, taking the direction of the difference into consideration. Evidently, the smaller the difference, the higher the agreement on the given subscale between the two participants. Figure 15.2 shows the distribution of differences on the DIH-scales in a sample of 363 to be described later.

We can modify this basic determination of synchrony in several ways.

¹ The research presented in this chapter has already been reported in Varga, Józsa, Bányai, and Gösi-Greguss (2012).

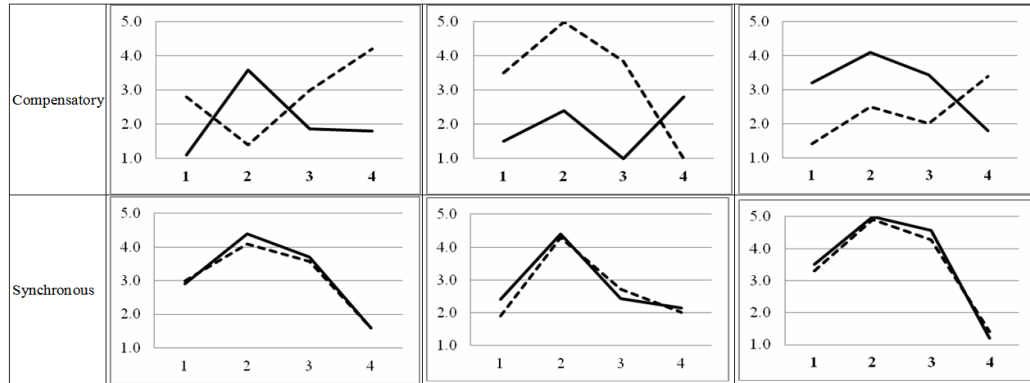


Figure 15.1. DIH scores of three typical compensatory (upper row) and three typical synchronous (bottom row) dyads. Each graph represents one dyad (broken line: subject, solid line: hypnotist). Ordinate: DIH-scores. Abscissa: subscales of DIH, 1: Intimacy, 2: Communion, 3: Playfulness, 4: Tension.

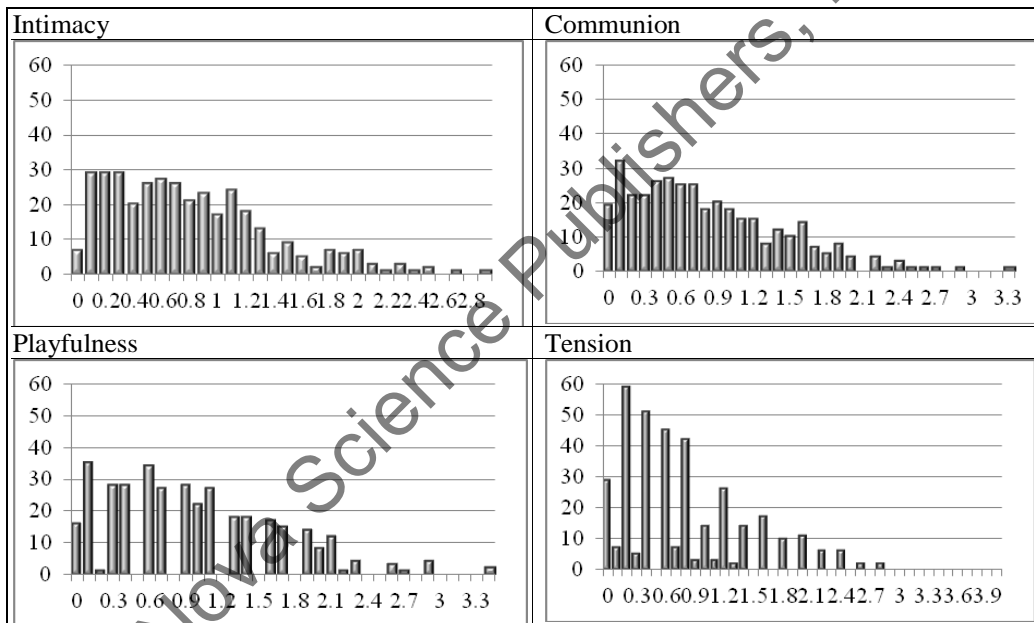


Figure 15.2. Distribution of the difference (absolute values) between the scores of the hypnotists and subjects for the subscales of DIH in N=363 standardized hypnosis sessions. Abscissa: the absolute difference between the scores of the two persons. Ordinate: number of cases.

We can create zones on the basis of the size of the difference. Arbitrarily, we considered a 0.5 point difference in the score as *synchrony*, while a 1.5 point difference was considered as *compensatory*, scores in between were evaluated as indications of *lack of synchrony*.

It is worth noting that extreme difference in the scores (1.5+) may also indicate great attunement: The cases we call “compensatory” show that the evaluation of the two partners are not tepidly independent of each other, but one of them gives just the opposite – as if to compensate – of what the other indicates (naturally, without any conscious consideration).

In other cases – where we wanted to make calculations with the subtle differences in the degree of synchrony – we *correlated* the values given by the two participants; this way, it was the correlation coefficient itself that was the index of synchrony. Chapter 16, where we show the relationship between synchrony and hypnosis styles, is an example of this approach.

15.1. THE RELATIONSHIP BETWEEN SYNCHRONY AT THE LEVEL OF EXPERIENCES AND HYPNOTIC SUSCEPTIBILITY

It is an interesting question what the relationship is between synchrony as measured by DIH and other indices of the same interaction.

BOX 21. RELATIONSHIP BETWEEN BEHAVIORAL SYNCHRONY AND PATTERNS OF SYNCHRONY ON DIH

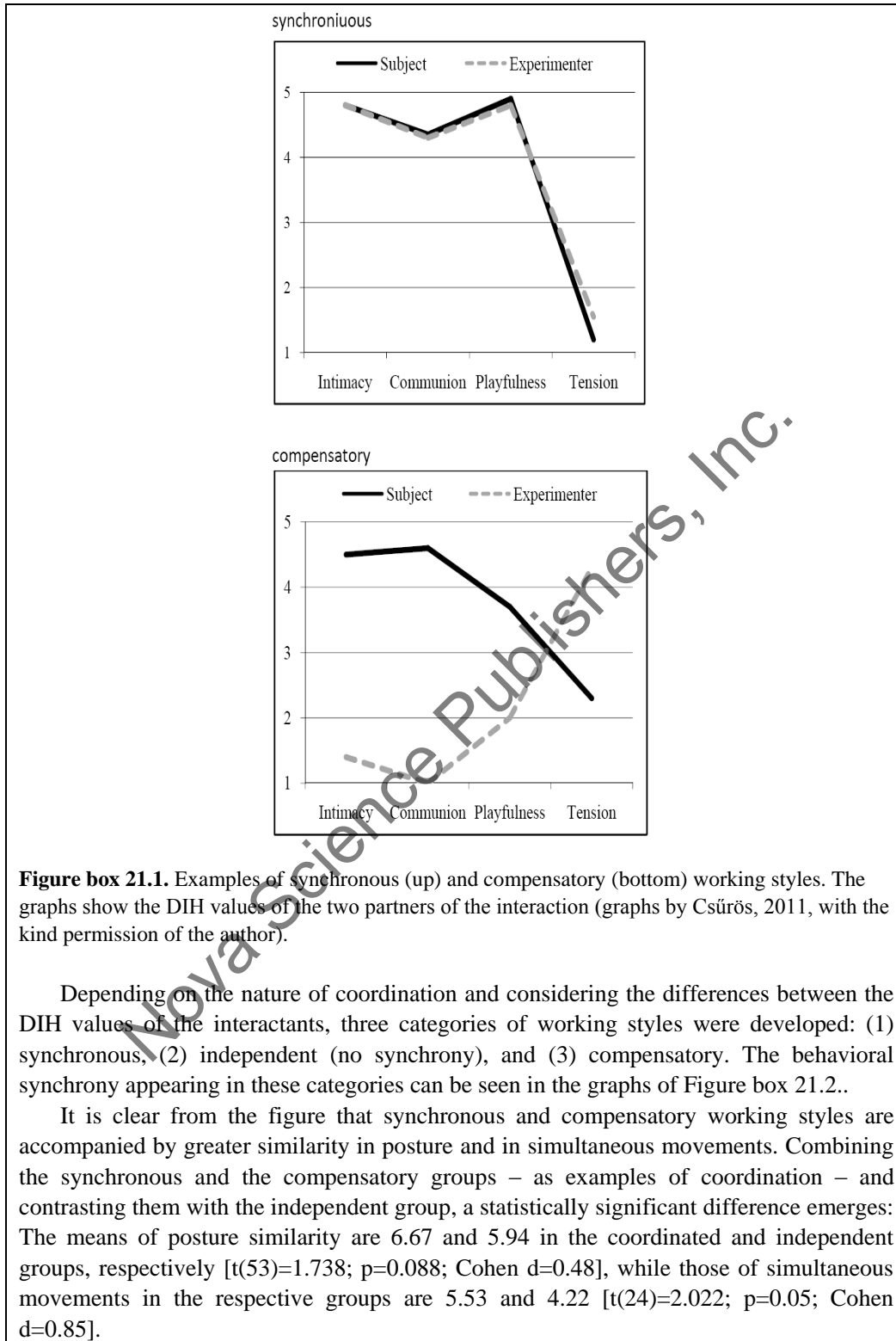
The relationship between experiential and behavioral synchrony was analyzed by the help of Visual Imaginative Synchrony (VIS, see Varga S., 2008, 2011; Varga S. and Varga, 2009a, 2009b, 2011; and Boxes 19 and 20 on VIS) by Csürös (2011), studying the interaction between strangers (28 dyads) and dating couples (34 dyads). After the standard VIS procedure, the dyads filled out some paper-and-pencil tests, including the DIH, in order to characterize their cooperation in a VIS situation. Subsequently, the members of the dyads had the opportunity to inspect the drawings of each other. A one-minute sample of the video-recording of this period served the basis of rating the behavioral synchrony of the interactional partners.

Behavioral synchrony was rated by independent judges in accordance with the holistic approach and instructions of Bernieri, Reznick, and Rosenthal (1988) on a scale from 1 to 9. The judgments considered the following:

- *Simultaneous movement*: How typical is it that the partners start and/or finish their movements together?
- *Similarity of rhythm*: How coordinated is the tempo of movement of the two persons?
- *Coordination and smoothness*: How harmonious, matched, and coordinated is the behavior of the two persons in general?
- *Similarity of posture*: How similar is the posture of the two persons?

The effective reliability indices among the three independent judges were above .6, Cronbach alpha values were around .6 – which is acceptable in similar materials. Of the reliability indices of the four considerations, simultaneous movement and similarity of posture proved to be the most reliable.

Based on the DIH scores, synchronous, compensatory, and independent dyads could be differentiated in the present study, too (see Figure box 21.1.).



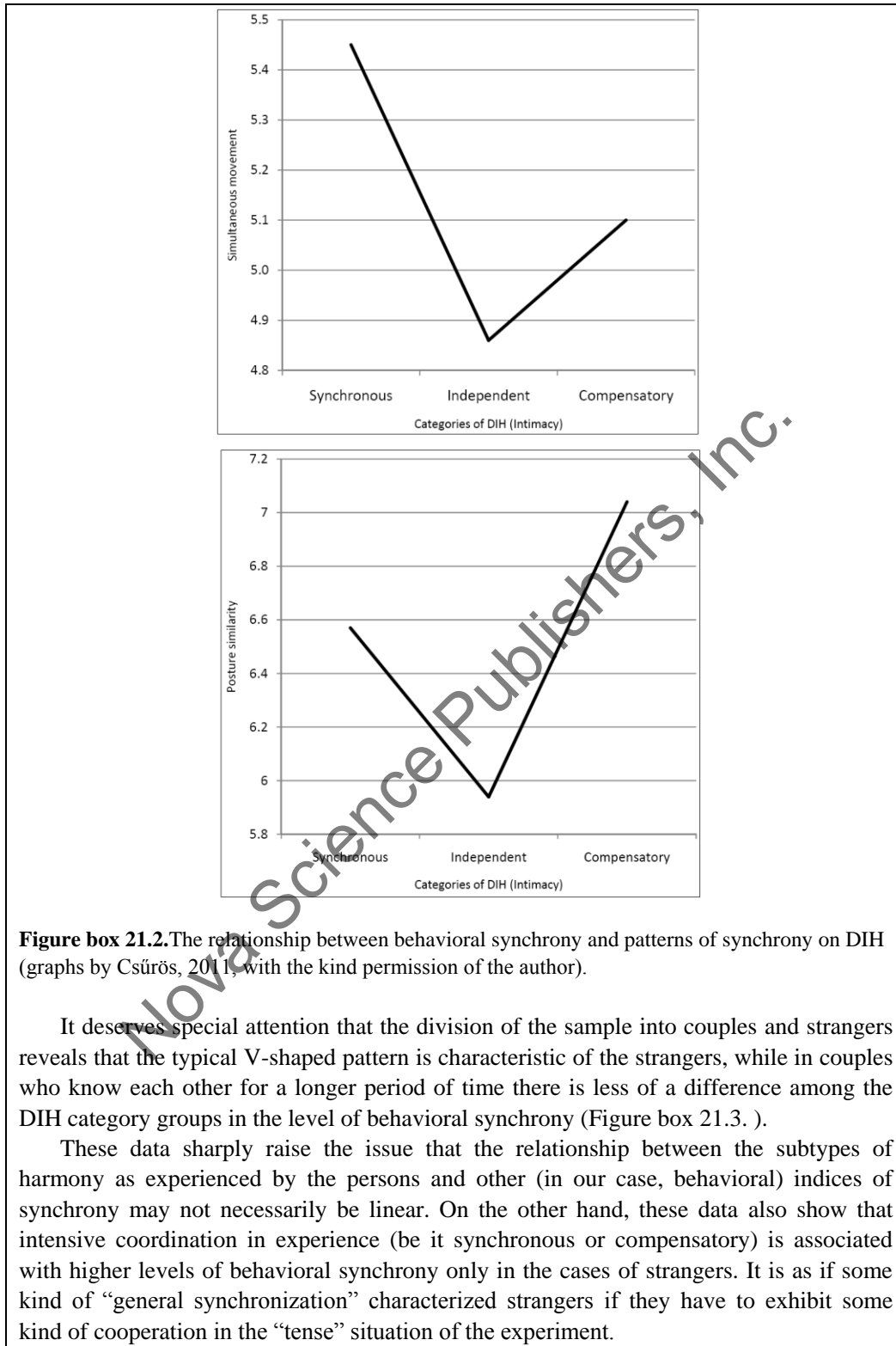
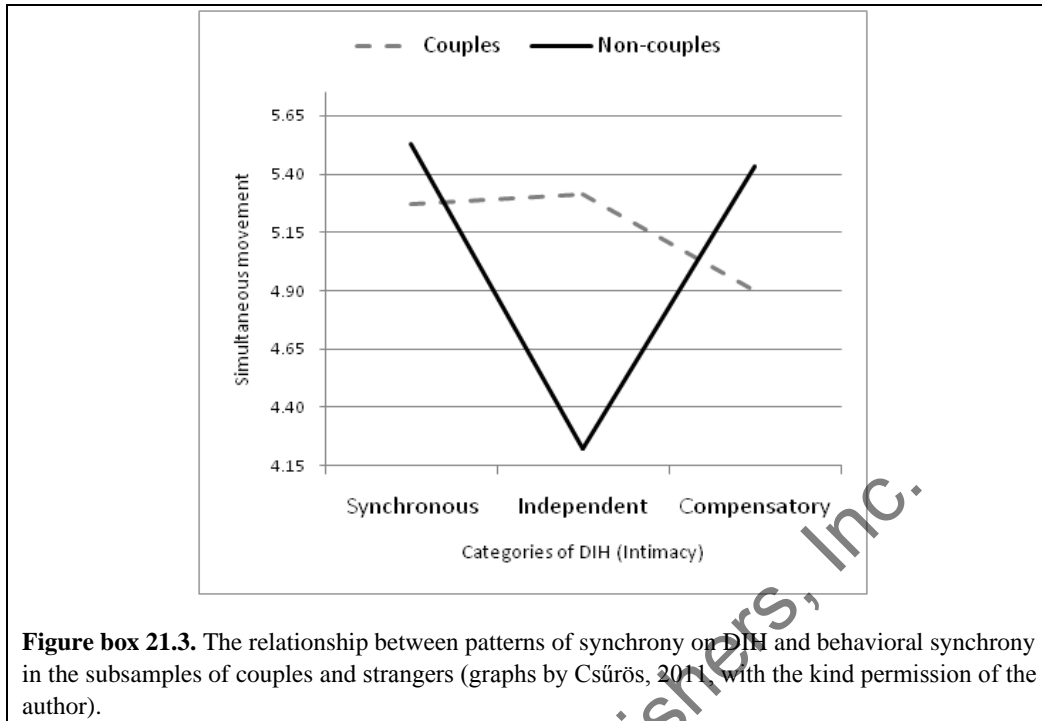


Figure box 21.2. The relationship between behavioral synchrony and patterns of synchrony on DIH (graphs by Csűrös, 2011, with the kind permission of the author).

It deserves special attention that the division of the sample into couples and strangers reveals that the typical V-shaped pattern is characteristic of the strangers, while in couples who know each other for a longer period of time there is less of a difference among the DIH category groups in the level of behavioral synchrony (Figure box 21.3.).

These data sharply raise the issue that the relationship between the subtypes of harmony as experienced by the persons and other (in our case, behavioral) indices of synchrony may not necessarily be linear. On the other hand, these data also show that intensive coordination in experience (be it synchronous or compensatory) is associated with higher levels of behavioral synchrony only in the cases of strangers. It is as if some kind of “general synchronization” characterized strangers if they have to exhibit some kind of cooperation in the “tense” situation of the experiment.



There was a great amount of material available to us for studying the relationship between the degree of synchrony as measured by DIH and the hypnotic susceptibility of the participants of the interaction.

The evaluation the common hypnosis session as appearing in the DIH can be considered as an index of rapport. Thus, it is even more interesting to see if “good rapport” or “synchrony at the level of experiences” appears only in highly hypnotizable persons or not.

The aim of the present analysis was to find out if the degree of synchrony between the subjective experience of rapport reported by hypnotists and subjects was related or not to the hypnotists’ hypnotizability scores and to the hypnotic susceptibility scores of the subjects. We hypothesized that there would be no linear correlation between hypnotic susceptibility and the degree of synchrony.

15.2. METHOD

In order to answer this question, we analyzed the data from sessions where DIH questionnaire was filled out by the subjects and the hypnotists independently of each other after the measurement of hypnotic susceptibility. In some of the 363 standardized laboratory hypnosis sessions, SHSS:A (Weitzenhoffer and Hilgard, 1959; the details of the “Twin”-study can be found in Appendix II) was administered, in others, SHSS:C was used (Weitzenhoffer and Hilgard, 1962; the details of the SZIA and the Hangol-6 studies can be found in Appendix II) to determine the hypnotic susceptibility.

The results of data-analysis are shown both for the whole sample (N=363), and separately for the two scales (SHSS:A and SHSS:C). As to the hypnotists, 4 male and 16 female

hypnotists participated, their average age was 39.14 years ($SD=10,49$), their average hypnotic susceptibility was 6.05 ($SD=2.98$). On the average, the hypnotists conducted 18.15 hypnosis sessions, with a range of 1-80. (The detailed characteristics of the samples are presented in Varga, Józsa, Bánya, and Gósi-Greguss (2012)).

15.3. RESULTS

Figure 15.3 illustrates the distribution of the 3 types of synchrony in the Intimacy subscale of DIH (which is the strongest subscale of the questionnaire) as a function of hypnotic susceptibility of the subjects. Naturally, the well-known inverted U-shaped distribution of hypnotizability is prominent in the figure (i.e., the number of the medium susceptible subjects is the greatest). What is relevant for our topic is that each type of synchrony (zones of difference) can be seen in each score of hypnotic susceptibility (except for the extreme scores 0 and 12). This means that neither synchrony, nor its absence can be assigned to any of the hypnotizability groups.

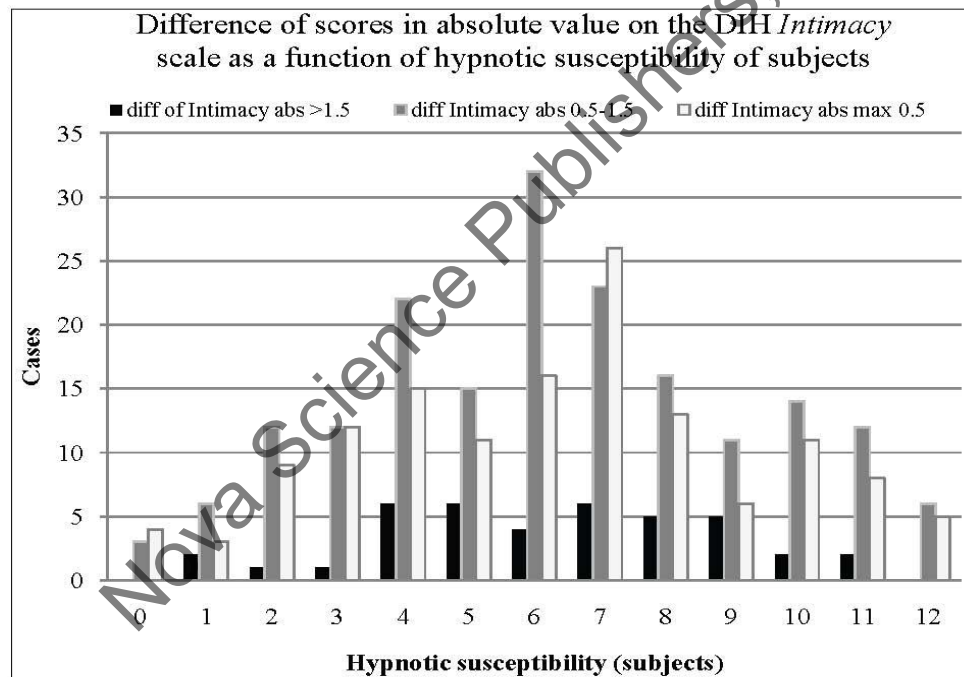


Figure 15.3. Distribution of the zones of difference (absolute values) between the scores of the hypnotists and subjects for the Intimacy subscale of DIH as a function of the hypnotic susceptibility of the subjects ($N=363$) (zones of difference: greater than 1.5, between 0.5-1.5, less than 0.5).

Table 15.1. Correlation coefficients between the degree of synchrony of DIH subscales and the hypnotic susceptibility (HS) values of Subject (S) and Hypnotist (H) for the total sample, and for the subsamples tested by SHSS:C and SHSS:A (* p < .05, ** p < .01)

| Degree of synchrony (Difference of DIH subscales) | | HS of S | | | HS of H | | | Difference between HS of S and H | | | Absolute difference between HS of S and H | | |
|--|---------------------|------------------|-----------------|------------------|------------------|-----------------|------------------|-------------------------------------|-----------------|------------------|--|-----------------|------------------|
| | | Total (n=363) | SHSSC (n=87) | SHSSA (n=276) | Total (n=363) | SHSSC (n=87) | SHSSA (n=276) | Total (n=363) | SHSSC (n=87) | SHSSA (n=276) | Total (n=363) | SHSSC (n=87) | SHSSA (n=276) |
| Intimacy | Raw difference | -0.06 | 0.06 | -0.09 | -0.10 | -0.9 | -0.12 | 0.01 | 0.11 | 0.02 | -0.09 | -0.15 | -0.15* |
| | Absolute difference | 0.03 | 0.10 | -0.00 | -0.01 | 0.06 | 0.00 | 0.01 | 0.06 | -0.00 | -0.09 | -0.16 | -0.07 |
| Communion | Raw difference | -0.10 | -0.05 | -0.15* | -0.06 | 0.14* | -0.07 | -0.04 | -0.10 | -0.06 | -0.06 | -0.05 | -0.06 |
| | Absolute difference | -0.18** | -0.16 | -0.21** | -0.10 | 0.10 | 0.11 | -0.21** | -0.22* | -0.24** | -0.04 | 0.03 | -0.06 |
| Playfulness | Raw difference | -0.01 | 0.16 | -0.06 | -0.05 | 0.27* | -0.10 | 0.02 | 0.01 | 0.03 | -0.17** | -0.26* | -0.16** |
| | Absolute difference | 0.05 | 0.13 | 0.01 | 0.05 | 0.26* | 0.02 | 0.01 | -0.01 | -0.01 | -0.08 | -0.15 | -0.06 |
| Tension | Raw difference | 0.06 | -0.11 | 0.13* | 0.02 | 0.03 | 0.02 | 0.03 | -0.09 | 0.08 | 0.02 | 0.27* | -0.04 |
| | Absolute difference | -0.14** | -0.08 | -0.18** | 0.05 | 0.10 | -0.18** | -0.14** | -0.13 | -0.17** | 0.04 | 0.02 | 0.05 |

SHSS:A: Stanford Hypnotic Susceptibility Scale, Form B, Weitzenhoffer and Hilgard, 1959.

SHSS:C: Stanford Hypnotic Susceptibility Scale, Form B, Weitzenhoffer and Hilgard, 1962.

**p<0.01; *p<0.05.

When the normalized and the absolute differences between the DIH scores of the subjects and hypnotists were correlated with either the subjects' or the hypnotists' hypnotizability scores, the correlation coefficients turned out to be mostly statistically non-significant, around zero (see Table 15.1).

The question arises if the *difference* between the hypnotizability of the subject and hypnotist is more decisive than the hypnotic susceptibility of the participants itself. It is conceivable that it is subjects and hypnotists in the same hypnotizability range who will experience hypnosis similarly. Thus, correlational analysis was performed between the difference in hypnotizability scores between subject and hypnotist and the synchrony-index of DIH, calculating both with the normal and the absolute values of differences in hypnotizability. Statistically non-significant correlations around zero were received again (see Table 15.1).

The degree of synchrony in DIH was also examined along the three categories of hypnotic susceptibility (low=0-4, medium=5-8, hi=9-12). Table 15.2 shows the means, standard deviations, and rank means of the synchrony values of DIH, and the results of the Kruskal-Wallis test used for comparison.

As can be seen, there is a significant difference among the groups only in the Communion subscale of DIH. Post hoc analysis revealed that there was greater synchrony in this subscale of DIH in the highly susceptible group (although its size effect is only .32) than in either the medium or the low hypnotizable groups (smaller difference values indicate greater agreement between the two participants).

Table 15.2 Means and standard deviations of the degree of synchrony (absolute) values in the three categories of hypnotic susceptibility (low, medium, high), together with the results of the Kruskal-Wallis test. The upper index in the post hoc column indicates the Cohen d value. Note: Smaller values represent higher agreement between hypnotist and subject on the given subscale. (p < .01)**

| DIH subscales absolute values | Low (L) (0-4) n=107 | Medium (M) (5-8) n=173 | High (H) (9-12) n=82 | Kruskal- Wallis H (df=2) | Post Hoc (LSD Rang) |
|-------------------------------------|---------------------------|------------------------------|----------------------------|--------------------------------|---------------------------|
| Intimacy | 0.77 (0.54) 177.06 | 0.82 (0.59) 183.22 | 0.81 (0.58) 183.66 | 0.275 | - |
| Communion | 0.89 (0.62) 197.90 | 0.82 (0.57) 187.90 | 0.63 (0.60) 146.59 | 12.443** | H< ^{0.32} M=L |
| Playfulness | 0.84 (0.63) 163.67 | 1.04 (0.71) 193.22 | 0.95 (0.69) 180.04 | 5.315 | - |
| Tension | 0.90 (0.70) 198.90 | 0.77 (0.66) 179.62 | 0.68 (0.62) 162.77 | 5.699 | - |

15.4. DISCUSSION

As can be seen from our data, there were only low or non-significant correlations between the hypnotic susceptibility of the participants and the degree of synchrony between the subjective judgments of the hypnosis sessions. The only significant result was at the Communion subscale of DIH: In case of highly hypnotizable subjects, there was a greater agreement between subjects and hypnotists regarding the session than in the other two hypnotizability groups, although effect size was quite small even here.

Relying on these data, we can say that the participants can experience synchrony of experiences at any level of hypnotic susceptibility. This implies that hypnosis can be used widely (i.e., it can provide profound experiences not only to highly susceptible people); it is possible that the reason behind its clinical effectiveness lies in the very experience of synchrony.

Some studies show that medium and low susceptible persons (i.e., the greater part of the population) are more sensitive to the interpersonal components of the session. For example, the study by Lynn, Weekes, et al. (1991) demonstrated that the radical manipulation of the interpersonal climate of group hypnosis sessions did not deeply influence the responses of the highly susceptible subjects, either at the behavioral, or at the subjective level, but it did affect that of the lows: Lows performed much better in the “high interpersonal climate” condition, i.e., when the hypnotist – in accordance with the role prescribed by the experimenters – created warm interpersonal rapport with the subjects.

On the other hand, the low correlation coefficients between synchrony and hypnotizability also imply that high hypnotic susceptibility does not guarantee close rapport at the level of experiences. Perhaps this is one of the reasons why most hypnotherapists are reluctant to measure hypnotic susceptibility in clinical contexts.

It is conceivable – as we will discuss this later – that the mechanism behind the possibility of hypnosis-related subjective synchrony is related to early interpersonal experiences, especially in a clinical situation. Some people are able to experience closeness and intimacy quite easily, while others – possibly primed by early relational experiences – feel uncomfortable in too close and intimate interactions.

The joint analysis of the DIH values of subjects and hypnotists can be looked at as a new tool of measuring rapport. As opposed to previous research, where rapport was measured unilaterally (usually as rated by the subject), in the present approach, the measure reflecting the quality of rapport is based on the evaluation of both participants of the interaction, that is, the index of synchrony itself.

It is another important difference between this approach and most of the previous ones on interpersonal climate that in our experiments the participants could develop their relationship in a natural, manipulation-free way (cf. the related part in Chapter 6).

It is also important that – to the best of my knowledge of the literature – nobody before us studied the possible effect of the hypnotic susceptibility of the hypnotist on rapport (on the degree of synchrony at the level of experiences). We found no close relationship between these indices. Therefore, we can say that the hypnotic susceptibility of the hypnotist does not bias the measurement of hypnotic responsiveness of the subjects.

Naturally, this analysis and the conclusions drawn from it have to be looked at with reservations: For example, the number of male and female hypnotists was not the same, and

the numbers of hypnosis sessions in the experiments per hypnotist were not equal, either. The most important limiting factor could be that all of these results came from standardized laboratory experiments that can say nothing about what can happen in a real clinical situation. Furthermore, synchrony itself could also be more subtly determined than how we did it in the present analysis (please recall that we simply translated the possible courses of the curves shown in Figure 15.1 into the language of mathematics).

Naturally, it is possible that the relationship between synchrony of experiences and hypnotizability is not linear (as the Box 21 on The relationship between synchrony pattern on DIH and behavioral synchrony shows); the linear correlational analysis applied in our study is not suited to demonstrate this.

BOX 22. TYPES OF COORDINATION ON THE BASIS OF CLUSTER ANALYSIS

Looking for a way to grasp the patterns of phenomenological interaction patterns, Józsa (2012b) identified patterns of interactional synchrony in the material of our laboratory. All of the participants in the data base of 389 subjects and 22 hypnotists of individual hypnosis sessions filled out the DIH, PCI, and AIM questionnaires after the session. Based on the difference in the DIH scale values between the subject and the hypnotist, k-centered hierarchical cluster analysis revealed four clusters.

The sample was distributed evenly in the four clusters: Each had 90-100 dyads, and almost all of the hypnotists were present in each cluster (and the other way around: hypnotists with many hypnoses appeared in each cluster). It is important that each cluster included low, medium, and high susceptible subjects and hypnotists in the same proportion. However, characteristic differences were found in the phenomenological indices.

The results are vividly illustrated in Józsa's figures: Only those aspects are demonstrated here that differentiate the given cluster from the others the best (figure by Józsa, 2012b, with the kind permission of the author).

The arrows in the figure show the relationship between the given component and the other clusters: ↑ shows intensity of experiences that are higher than those of the other clusters, ↓ shows intensity of experiences that are lower than those of the other clusters. Double arrows (↕ or ↘) indicate that the given component had the greatest or the lowest intensity according to the statistical analysis.

Table box 22.1. Patterns of interactional synchrony

| Subjects | Cluster 1 | Hypnotists | |
|----------|------------------------|------------|---|
| ▼ | <i>DIH Intimacy</i> | moderate | SLIGHTLY INVOLVED SUBJECT, TENSE AND EMOTIONAL HYPNOTIST The overall image of this cluster is dominated by the tension and negative feelings of the hypnotist, coupled with |
| moderate | <i>DIH Communion</i> | ▼ | |
| moderate | <i>DIH Playfulness</i> | moderate | |
| ▼ | <i>DIH Tension</i> | ▲▲ | |

| Table box 22.1. (Continued) | | | |
|------------------------------------|---|-------------------|--|
| Subjects | Cluster 1 | Hypnotists | |
| moderate ▼▼ | <i>PCI Altered Experience Altered State of Awareness Dissociative Control Attention to Internal Processes Positive Affect</i> | ▲ moderate | the lack of alteration of consciousness and archaic involvement of the subject (it remains to be answered which is the cause and which is the effect). It is interesting that in spite of this, the involved parties rated the interaction “mildly”, they gave mostly moderate rating on the scales. |
| ▼▼ | <i>PCI Negative affect Arousal</i> | ▲▲ | |
| ▲▲ | <i>PCI Self Awareness</i> | ▼ | |
| ▼▼ | <i>AIM +</i> | ▲ | |
| ▼▼ | <i>AIM Admiration and attachment toward the hypnotist</i> | --- | |
| ▼▼ | <i>AIM fear of negative appraisal</i> | moderate | |
| Subjects | Cluster 2 | Hypnotists | |
| moderate | <i>DIH Intimacy Communion Playfulness</i> | moderate | THE STRONG TRANCE EXPERIENCE AND INTENSIVE EMOTIONS OF THE SUBJECT ARE LOOKED AFTER BY A RATIONAL HYPNOTIST This cluster depicts the “classical” hypnosis situation: The hypnotist is present with high self-awareness, attention, and rationality, and experiences no alteration of consciousness, but the subject may wander into the world of extreme trance experiences and emotions under the hypnotist’s surveillance. Nevertheless, the relationship itself is given only moderate ratings by the involved parties. |
| ▲▲ | <i>DIH Tension</i> | ▼▼ | |
| ▲▲ | <i>PCI Dissociative Control Negative Affect Attention to Internal Processes</i> | ▼▼ | |
| moderate ▲▲ | <i>PCI Altered experience Positive affect</i> | ▼ | |
| moderate | <i>PCI Absorption Self-awareness Rationality Memory</i> | ▲▲ | |
| moderate | <i>AIM +and</i> | ▼▼ | |
| ▲▲ | <i>AIM Admiration and attachment toward the hypnotist Fear of negative appraisal</i> | --- | |
| Subjects | Cluster 3 | Hypnotists | |
| ▲▲ | <i>DIH Intimacy Communion Playfulness</i> | ▼▼ | SUBJECT INVOLVED WITH STRONG POSITIVE EMOTIONS AND THE LEAST INVOLVED HYPNOTIST Similarly to the previous cluster, extreme trance experiences and archaic involvement of the subject characterize this cluster, but the hypnotist follows the |
| ▼ | <i>DIH Tension</i> | moderate | |
| ▲▲ | <i>PCI Love</i> | ▼▼ | |
| moderate | <i>PCI Positive affect Altered experience</i> | ▼▼ | |
| ▼▼ | <i>PCI Negative affect</i> | moderate | |
| moderate | <i>PCI Dissociative Control Attention to Internal Processes</i> | ▼ | |

| Subjects | Cluster 3 | Hypnotists | |
|---|---|------------|--|
| ▲▲ | AIM + | ▼ | situation with “waking” rationality. It is striking that the involved parties evaluate the relationship itself extremely and in sharp contrast with each other. |
| moderate | AIM – | ▲ | |
| --- | AIM Fear of negative appraisal Need for control | ▼▼ | |
| Subjects | Cluster 4 | Hypnotists | |
| ▼▼ | DIH Intimacy DIH Communion DIH Playfulness | ▲▲ | THE HYPNOTIST’S OWN TRANCE EXPERIENCE AND EMOTIONAL INVOLVEMENT IF EMPHATIC, THE SUBJECT IS NOT INVOLVED EMOTIONALLY. This cluster is an interesting example of the case when the roles appear to be switched: with the high archaic involvement and alteration of consciousness of the hypnotists the subjects are tense, do not evaluate the interaction highly, and are not involved. |
| ▲▲ | DIH Tension | moderate | |
| moderate | PCI Dissociative Control Altered experience Self awareness Rationality Memory | ▲▲ | |
| ▼▼ | PCI Positive affect Attention to Internal Processes | ▲▲ | |
| ▼▼ | AIM + | ▲▲ | |
| --- | AIM Fear of negative appraisal Need for control | ▲▲ | |
| See Józsa et al. (2011a, 2011b) for further details and Józsa (2012b) for a detailed summary. | | | |

These considerations also designate the possible directions of further research in this area.

Nova Science Publishers, Inc.

PART V: SPECIAL POSSIBILITIES OF THE INTERACTIONAL APPROACH OF THE PHENOMENOLOGICAL DATA

INTRODUCTION

This part will include some examples that demonstrate the special possibilities of interactional phenomenological analysis. The first one will show the relationship among *hypnosis styles* (maternal, paternal), phenomenology, and relational data. Then we will examine the harmony between level of kinship and experiential indices within the framework of a twin study on the *heredity* of hypnotic susceptibility.

Finally, we will review the data of one of our investigations that studied the relationship between the *endocrinological indices* and experiential data in the hypnotic interaction.

It is always useful to attend to the possibility that the phenomenological data processed with an interactional approach yield empirical data that can identify special phenomena that cannot be seen by individual methods.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

PHENOMENOLOGY OF HYPNOSIS STYLES

During the past decades, our laboratory described two characteristic hypnosis styles, the *physical-organic* and the *analytic-cognitive* styles. The most important features of these styles are summarized in Box 23.

These two basic forms of involvement closely resembled the hypnosis styles described by Ferenczi (1909/1965), so we gave the same name to them: Physical-organic style is now metaphorically called *maternal hypnosis style*, which is based on love, while analytic-cognitive style is called *paternal hypnosis style*, which is based on fear (Bányai, 2002). These names, of course, do not mean (simply) the direct recurrence of the appropriate parent-infant relationship patterns; the styles only resemble them in some respects.

These styles served as an appropriate basis for the examination of the nature of subjective experiences of the participants of the hypnosis interaction along with the hypnosis styles.

16.1. METHOD

In our laboratory experiment (see “SZIA” main part (3. round) in Appendix II.), each of four hypnotherapists hypnotized 8 young, healthy volunteer subjects (including two simulators: subjects proved to be extremely low in hypnotic susceptibility were used as simulators). It was essential for the development of hypnosis styles to use non-standard hypnotic procedures. The sessions were semi-standardized: Free relaxation induction was followed by free analgesia suggestion, analgesia was tested by a standardized cold pressor test, and then standardized age regression and trance-logic suggestions were administered; the sessions were closed by free dehypnosis and a brief inquiry. The subjective experiences of the participants were screened with PCI and DIH questionnaires immediately after the session (for further details see Varga, Bányai, Józsa, and Gósi-Greguss, 2008).

**BOX 23. THE MOST IMPORTANT CHARACTERISTICS OF
MATERNAL AND PATERNAL STYLES OF HYPNOSIS**

Table box 23.1.

| | <i>Maternal (physical-organic) style</i> Hypnosis is based on positive emotions | <i>Paternal (analytical-cognitive) style</i> Hypnosis is based on the respect of authority |
|---|--|---|
| Verbal manifestations (during rapport formation) | More personal | More formal |
| Characteristics of interactional synchrony in the course of hypnosis (e.g., posture mirroring, simultaneous movement, joint breathing rhythm) | Signs of interactional synchrony and eye contact are frequent, bodily proximity is closer | Signs of interactional synchrony and eye contact are absent or rare, bodily proximity is distant |
| Relationship with the subject | Emotions appear more freely, the atmosphere is more personal and calming. The hypnotist is very much together with the subject. The main aim of the hypnotist is to facilitate the realization of the intentions and ideas of the subject, and to support the independent strivings of the subject. The current state and desires of the subject are in the center of attention. | It slightly suppresses the independent strivings and verbal behavior of the subject. The hypnotist leads and directs the hypnotized subject. The main striving of the hypnotist is to realize the hypnotist's own ideas and intentions, and slightly restricts the independent initiatives of the subject. The present state and desires of the subject is not emphatic for the hypnotist. The atmosphere of the session is mentally stimulating. |
| Main characteristics in the report of subjective experiences | The hypnotist relies on his/her own bodily signals, and is deeply involved. | The hypnotist makes professional comments, interpretations and analyses the hypnosis session. |

Based on Bányai (2002a).

16.2. RESULTS

Judgment of hypnosis styles: Four expert judges trained in psychotherapy and in hypnosis rated the 32 hypnosis sessions independently: The verbatim transcripts of the hypnosis sessions served as a basis of judgment. All indications of name, gender, and hypnotic susceptibility of the participants were eliminated from the transcripts. To assess the judges' aggregate reliability, effective reliability was calculated (Rosenthal and Rosnow, 1991). The consistency of judgments was also assessed by calculating Cronbach's alpha coefficient (Cronbach, 1951). Reliability was considered acceptable if both measures were above .60.

Correlations between hypnosis styles and measures of subjective experiences: To characterize the relationship between hypnosis styles and subjective experiences, intercorrelations were calculated. The results are shown both for the whole sample (N=32 interactions) and for the sample without simulators (N=24 interactions).

The relationships between maternal and paternal scores and DIH scores of hypnotists and subjects are shown in Figures 16.1.a and 16.1.b.

As it can be seen in the figures – although the correlations themselves are moderately high, and because of the low sample size, they are not significant – the *pattern* of the results is obvious and striking. All of the correlations between maternal score and the DIH scales are positive both for hypnotists and subjects, while they are negative with paternal scores.

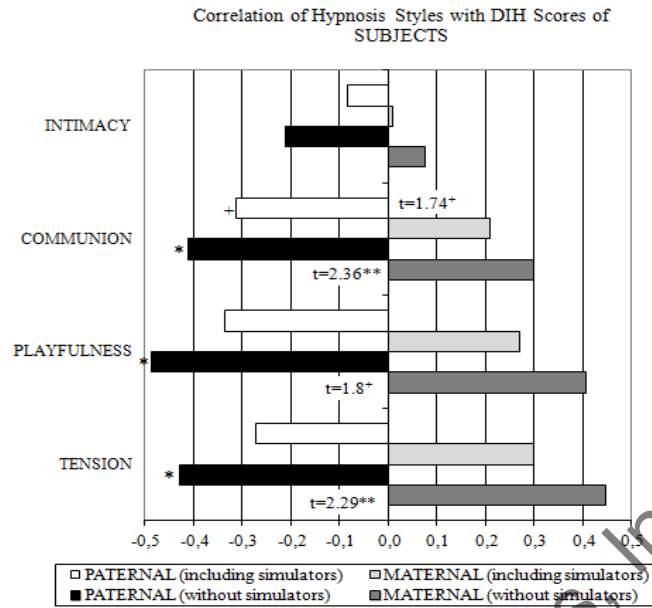
There is a noticeable difference in the results of subjects and hypnotists: In the case of subjects, the lowest correlations turn up between maternal-paternal scores and the DIH *intimacy* scale (these correlations are close to zero), while in the case of hypnotists, these are the highest correlations (most of them are significant). Although we cannot conclude cause and effect from correlations, this result may imply that hypnotists tend to judge their own intimacy score in a given situation according to their judged style (i.e., in the cases of maternal style, they report higher intimacy scores, while in the cases of paternal style, they report the lack of intimacy). Subjects, on the contrary, seem to score their intimacy independently of the style of the hypnotist.

It seems to be an important result that real subjects produced more obvious, stronger relationships between hypnotist styles and DIH scores. (The correlations calculated with the inclusion of the simulators are always lower than those without them in the case of the subjects, while in case of hypnotists, the situation is reversed: The correlations with the simulators are higher than those calculated without them.). Hypnotists, on the other hand, seemed to be a little “more present” in the interactions when the simulators were involved than with real subjects only (even if the hypnotists were not aware of the simulators). Perhaps they showed a more prototypical variant of their style when they encountered simulators.

Among the numerous indices of PCI, we will discuss only the most important ones from the point of view of our question: How much are the components of the altered of state of consciousness experienced in the cases of the maternal and paternal hypnosis styles, and what kinds of emotions accompany them in both participants of the hypnosis interaction. These scales are *Altered Experience* main scale with its component subscales (Alterations in Body Image, Time Sense, Perception, and Meaning) and the *Affect* main scale with its subscales here.

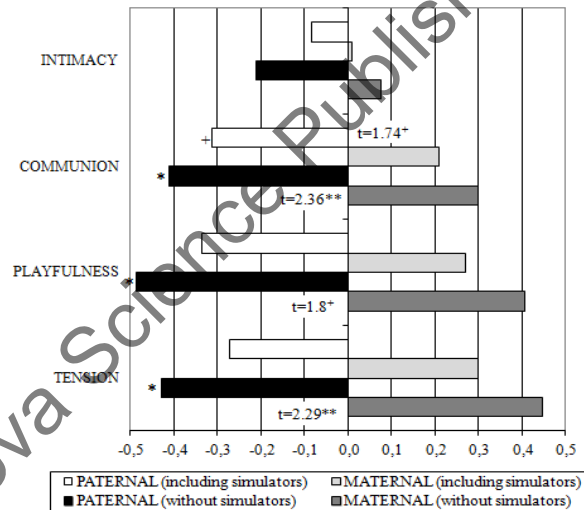
Figures 16.2.a and b show the correlation between PCI's *Altered Experience* main scale (and its subscales) and hypnosis style scores both for the subjects (a), and the hypnotists (b).

The experience or the lack of experience of an altered state of consciousness of the subjects seem to be independent of the style of hypnosis (Figure 16.2.a). The pattern is clear: the *Altered Experience* of the subjects is either independent from the styles (correlations are close to zero) or show positive correlations with both styles (except for alteration of *Body Image* and *Meaning*: They show a very moderate negative correlation with paternal style). Since the highest correlations are around .2 here, it can be concluded that the *subjects can experience the most important components of an altered state of consciousness with either hypnosis style.*



a)

Correlation of Hypnosis Styles with DIH Scores of SUBJECTS



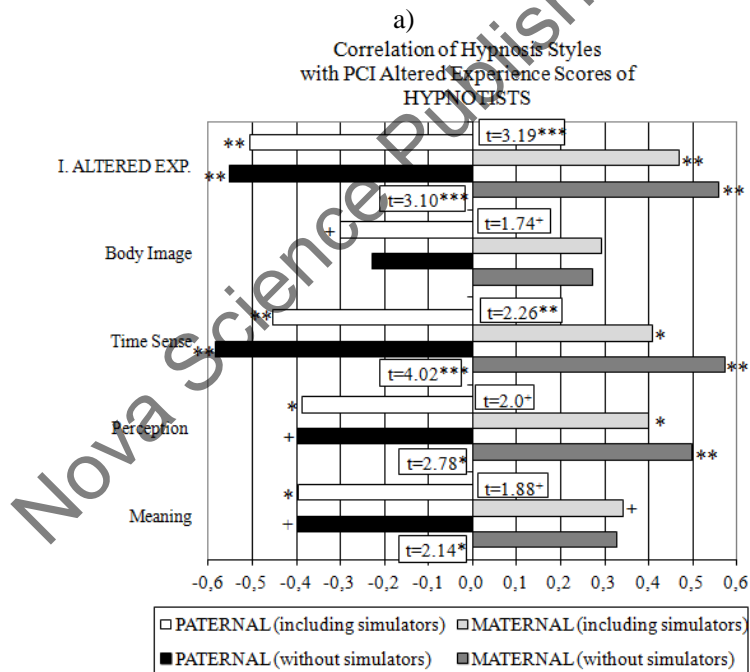
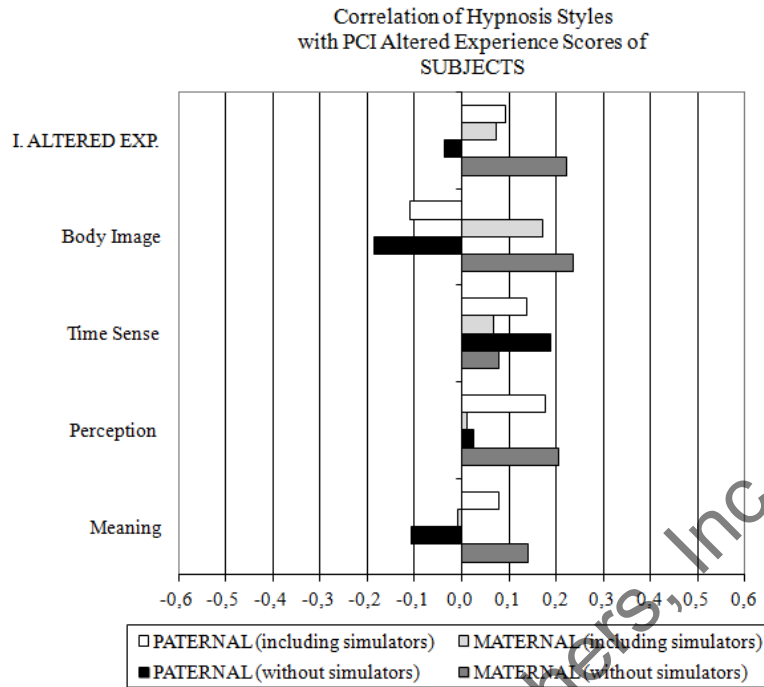
b)

Note: t refers to the difference of correlations, ⁺p < .1, *p < .05, **p < .01¹

Figure 16.1. a) Correlations between hypnosis styles and DIH scores: Results of SUBJECTS.

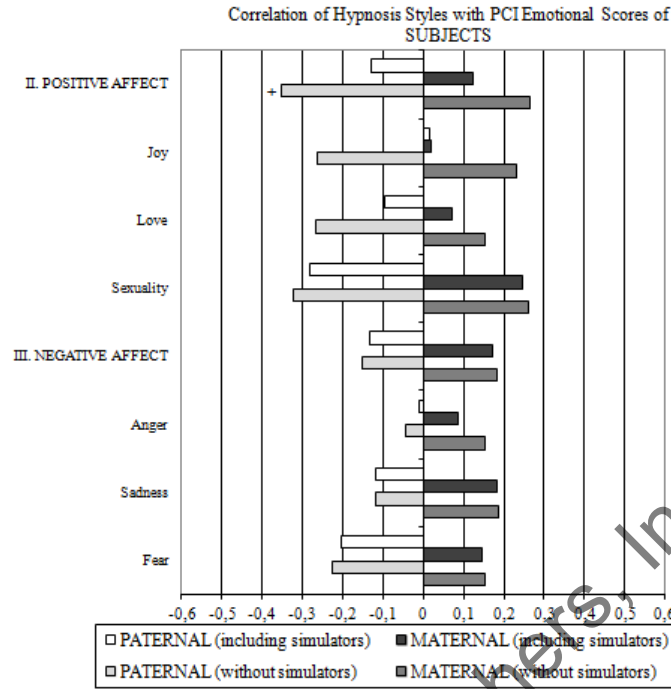
b) Correlations between hypnosis styles and DIH scores: Results of HYPNOTISTS. ⁺p < .1, *p < .05, **p < .01

¹ The difference between these correlations was calculated according to Williams's T2 statistic that tests whether two dependent correlations (here: correlations between maternal style and a given DIH subscale and between paternal style and a given DIH subscale) that share a common variable (here: the given DIH subscale) are different. This test is the one recommended by Steiger (1980) for this purpose (the same method is used in the following figures).

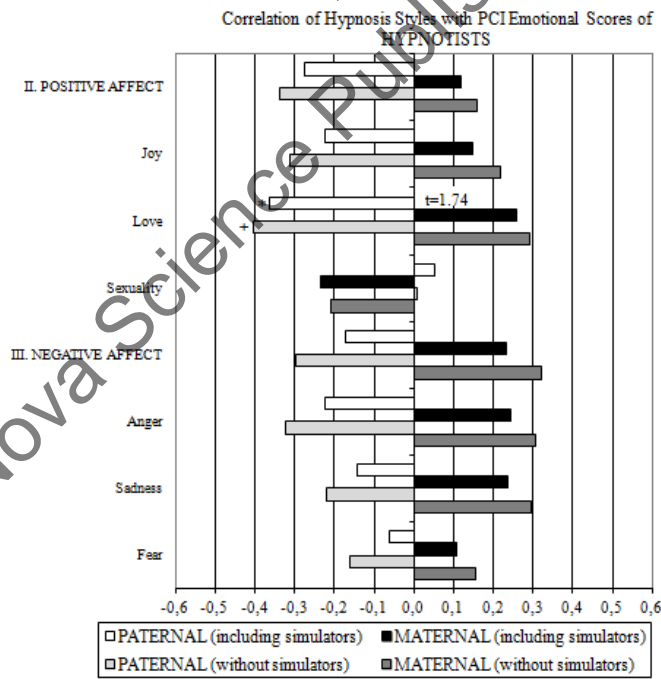


Note: t refers to the difference of correlations, +p< .1, *p< .05, **p< .01, ***p< .005.

Figure 16.2. a) Correlations between hypnosis styles and PCI Altered Experience factor scores: Results of SUBJECTS. b) Correlations between hypnosis styles and PCI Altered Experience factor scores: Results of HYPNOTISTS.



a)



b)

Note: t refers to the difference of correlations, * $p < .05$.

Figure 16.3. a) Correlation between hypnosis styles and PCI affect factors: results of SUBJECTS. b) Correlation between hypnosis styles and PCI affect factors: results of HYPNOTISTS.

No wonder, that the *hypnotists scoring* their own alteration of consciousness by PCI show the connection unambiguously with (their own) hypnosis style (Figure 16.2.b). Maternal and paternal styles go hand in hand with significant positive and negative correlations, respectively. The more the hypnotist was characterized by maternal style, the more *Altered Experience* while hypnotizing he/she reported, while the more he/she was paternal, the more he/she reported the lack of these alterations. So paternal hypnotists' experience of Body Image, Time Sense, Perception, and Meaning remained similar to the reality orientation of the normal waking state.

In contrast to the pattern given on DIH by the hypnotists, in this case (PCI), the presence of simulators slightly moderated this connection, as if maternal hypnotists could experience these alterations *less* with simulators, and paternal ones needed less to indicate the lack of alteration – in this case, they tend to keep the ordinary waking experience-modes as compared to the cases of hypnotizing real subjects.

As it can be seen in Figures 16.3.a and b, both the *Positive Affect* and the *Negative Affect* main scales and their subscales of PCI showed the same pattern in case of both the subjects and the hypnotists: Maternal hypnosis was correlated with the experience and expression of (either positive or negative) emotions, while paternal style showed a reverse relationship.

The only important exception to this pattern was that the more maternal the style was, the less the hypnotist reported sexual excitement. It is interesting that no opposite pattern was found in paternal style.

16.3. DISCUSSION

In the interpretation of our results, it is important to emphasize the fact again that the *style scores* – verbatim transcripts (!) judged by independent raters – and *experience data* – the interactants' self-reported answers on the questionnaires – originated in very different kinds of characteristics of the given interaction.

The construct of “hypnosis style” are supported by these data, as the *pattern* of correlations of subjective experience data and style scores are in line with our theoretical expectations. In the case of *maternal style*, subjects can experience the alteration of consciousness while their hypnotist “follows” (or “leads”?) them into the domains of alteration independently of the level of maternity. Higher maternity is accompanied by a higher intimacy-experience on the side of hypnotists, and more expressed emotions in both interactants. Maternal style is characterized by a *generally* more overt presence of emotions; let them be positive or negative.

Paternal style also makes it possible for the subjects to experience the alteration of consciousness subjectively, but in this case, either the subjects, or the hypnotists are moderate in the experience and expression of emotions, and there is no place for togetherness, playfulness or intimacy in the situation – as opposed to the maternal style.

Looking at the results from another point of view, these results serve as validation indicators for the subjective experience tests applied in this study, since hypnosis styles can be described and confirmed with several other parameters beyond the direct judgment of style (see Bányai 1998, 2002).

Our result showed that from the point of view of the alteration of consciousness of subjects, any style can be favorable; this means that the experience of alteration is not dependent on style. We can draw the conclusion from this that the extent of the alteration of consciousness is determined by something else. Because PCI is a state-indicator, experience of alteration may depend on some other, trait-like parameter(s) of the subject.

Nova Science Publishers, Inc.

PHENOMENOLOGICAL PATTERNS AS A FUNCTION OF KINSHIP¹

The second example will show the relationship among various phenomenological measures in connection with hypnosis as a function of kinship.

Hypnosis is unique among altered states of consciousness because of its extended research under well monitored and standardized circumstances. Since the development of standardized susceptibility scales – most of them based on the Stanford Hypnotic Susceptibility Scales (SHSS, Forms A, B, and C; Weitzenhoffer and Hilgard, 1959, 1962) – the induction and the test suggestions can be administered in a well controlled way, making it possible to investigate hypnosis in various international and cultural environments (see, e.g., Bergman, Trenter, and Kallio, 2003; Bongartz, 1985; David, Montgomery, and Holdevici, 2003; De Pascalis, Russo, and Marucci, 2000; Kallio and Ihamuotila, 1999; Lichtenberg, 2008; Pyun, and Kim, 2009; Siuta, 2010).

Hypnotic susceptibility, that varies from individual to individual, is a highly stable trait of a person (Piccione, Hilgard, and Zimbardo, 1989). The norms of standardized susceptibility scales in various languages and samples confirmed again and again the close to normal distribution of susceptibility. The individual stability and “same-distribution” nature of hypnotic responsiveness imply that it is based, at least partially, on biologically determined factors, with a certain amount of genetic contribution. Recent molecular genetic studies report COMT gene as a candidate to be associated with hypnotizability (Lichtenberg, Bachner-Melman, Ebstein, and Crawford, 2004; Lichtenberg, Bachner-Melman, Gritsenko, and Ebstein, 2000; Raz, 2005; Raz, Fan, and Posner, 2006; Szekely, Kovacs-Nagy R., Bányai, Gösi-Greguss, et al., 2010).

Surprisingly, only one early study (Morgan, Hilgard, and Davert, 1970; Morgan, 1973) investigated directly the heritability of hypnotic ability until today. This research focused only on the susceptibility scores of the hypnotized subjects.

¹ Details of this study are available: Varga, K., Bányai, É. I., Gösi-Greguss, A. C., Tauszik, K. (n.d.) Phenomenological aspects of hypnotic interactions: The effect of kinship. Paper accepted to the International Journal of Clinical and Experimental Hypnosis

17.1. METHOD

Our laboratory, wishing to replicate the work of Morgan (1973), extended the original investigation by (1) measuring the phenomenological aspects (apart from the behavioral scores of susceptibility) and by (2) including the investigation of the hypnotist (in addition to the subjects). As we have seen above, hypnotic interactions do differ in the level of concordance/accord between the subjective reports of the hypnotist and the subject. Some hypnotic dyads show high agreement and a similar pattern, while others do not match each other in the way they report their subjective feelings regarding the hypnosis session. In this section, we tested the relationship between the level of kinship and the degree and nature of synchrony.

Comparing the pattern of data among the subjects and between the hypnotist and subjects of various degree of kinship, we wanted to learn more about the possible genetic background of hypnotic responsiveness. Apart from the basic data of hypnotic susceptibility, well established measures of hypnosis (e.g., DIH, PCI) were used both with subjects and with hypnotists to test the effect of kinship. Subjects (monozygotic twins [MZ], dizygotic twins [DZ], siblings, and parent-child pairs) were hypnotized using the standard protocol of SHSS:A (Weitzenhoffer and Hilgard, 1959). To prevent the relatives from influencing each other (e.g., by discussing their experiences), they were hypnotized simultaneously by two different hypnotists in two separate experimental chambers. Immediately after the hypnosis session, the hypnotist and the subject completed the questionnaires independently of each other (Varga, Bányai, Gósi-Greguss, and Tauszik, n.d.; see Appendix II Details of the studies for further details).

17.2. RESULTS AND DISCUSSION

Here we report only the most peculiar results of our study. The relationship between the variables will be expressed in intraclass correlations (ICC)². When the two members of relatives (e.g., the two members of a twin pair) are compared, we will indicate it by “S-S”; when the subject and the hypnotist of the same session are compared, we will refer to it by “S-H” (see **Table 17.1**, and **Table 17.2**).

As it can be seen, all the correlations of *hypnotic susceptibility* are low and non-significant.

In case of PCI, there are significant moderate to high intraclass correlations between the members of the MZ twins on Dissociative Control, Positive Affect, and Negative Affect. DZ twins show a moderate significant correlation on the Visual Imagery scale, while siblings correlate on Positive Affect and Attention to Internal Processes. Considering the S-H intraclass correlation of PCI scales, we see that all of the correlations are close to zero and

² This type of correlation is used to determine a correlation between two variables when it is not clear which variable should be X or Y for a given row of data. There are various ways to calculate ICC, we used the

formula:
$$r_i = \frac{s_b^2 - s_w^2}{s_b^2 + s_w^2}$$
 where s_b is the variance based on between groups and s_w is the variance based on within groups.

nonsignificant, except for the moderate significant correlations on Dissociative Control, and Positive Affect in cases of DZ twins.

On the DIH scale, where the interactants evaluate the session itself, a different pattern appeared. In the case of S-S intraclass correlations, MZ twins yielded high and highly significant correlations, with the only exception of Playfulness scale. Apart from this, all of the correlations were close to zero and nonsignificant. The S-H intraclass correlations of DIH scales are all close to zero and nonsignificant, apart from the significant moderate correlations between DZ twin members and their hypnotists.

According to our data, the only moderately high, significant intraclass S-S correlation on PCI is the *Positive Affect* scale in cases of MZ groups; all the others are either non-significant, or significant, but moderate. This implies that the ways relatives of various kinship experience the phenomenology of hypnosis are not very similar to each other.

As Appendix XIII shows, the average PCI scores of MZ twins are not significantly different from those of the other groups (with the only exception that MZ twins scored lower on the *Attention to Internal Processes* subscale than did the siblings). On the DIH scale, however, the MZ group gave significantly higher means than the other groups, with the only exception of "Communion", where MZ and DZ groups were similar to each other, significantly exceeding the other two groups). So, MZ members of our sample gave relatively higher scores when *evaluating the hypnosis interaction* (on DIH), but did not deviate from the other groups when their *actual phenomenological experiences* were reported (PCI).

It is surprising that the way interactants evaluated their recent hypnosis interaction on DIH was very similar in cases of members of MZ twins, but it was not so in cases of any other S-S dyads (not even in DZ twins)⁴.

Table 17.1. . The S-S and S-H intraclass correlations of SHSS: A and PCI factor based scales in twin study

| | SHSS: A | | PCI Dissociative Control | | PCI Positive affect | | PCI Negative affect | | PCI Visual imagery | | PCI Attention to internal processes | |
|-------------------------|---------|-------|--------------------------|-------|---------------------|--------|---------------------|-------|--------------------|-------|-------------------------------------|------|
| | S-S | S-H | S-S | S-H | S-S | S-H | S-S | S-H | S-S | S-H | S-S | S-H |
| Monozygotic twins n=62 | 0.22 | -0.03 | 0.35* | -0.04 | 0.52** | 0.04 | 0.36* | 0.1 | 0.22 | -0.03 | 0.13 | 0.13 |
| Dizygotic twins n=60 | 0.15 | -0.03 | 0.14 | 0.31* | 0.19 | 0.34** | 0.27 | -0.04 | 0.34* | 0.24 | 0.04 | 0.09 |
| Siblings n=62 | 0.17 | -0.03 | 0.14 | 0.01 | 0.39* | 0.2 | 0.08 | -0.18 | -0.06 | -0.03 | 0.45** | 0.2 |
| Parent-Child pairs n=94 | 0.07 | -0.03 | 0.11 | 0.03 | -0.02 | -0.06 | 0.12 | -0.1 | 0.08 | -0.1 | -0.11 | 0.04 |

S: subject, H: hypnotist, S-S: subject-subject correlations, S-H: subject-hypnotist correlations, *p<.05; **p<.01

⁴ If we calculate the intraclass correlations only for the subgroup of the same-sex DZ twins, in cases of PCI subscales, only the Visual Imagery subscale becomes more highly correlated (compared to the total sample of DZ twins, where we also found a significant, but moderate correlation). In cases of DIH subscales, all the intraclass correlations remains nonsignificant, except for Communion, where it becomes significant, moderately high ($r = .41$; see Appendix XIII/c for details).

Table 17.2. The S-S and S-H intraclass correlations of DIH scales in twin study

| | DIH Intimacy | | DIH Communion | | DIH Playfulness | | DIH Tension | |
|-------------------------|--------------|-------|---------------|-------|-----------------|------|-------------|-------|
| | S-S | S-H | S-S | S-H | S-S | S-H | S-S | S-H |
| Monozygotic twins n=62 | 0.58** | 0.03 | 0.55** | 0.16 | 0.17 | 0.11 | 0.40* | 0.05 |
| Dizygotic twins n=60 | 0.28 | 0.32* | 0.24 | 0.31* | -0.01 | 0.19 | 0.1 | 0.19 |
| Siblings n=62 | 0.07 | 0.2 | -0.02 | -0.01 | -0.03 | 0.08 | 0.18 | -0.15 |
| Parent-Child pairs n=94 | 0.11 | 0.13 | 0.06 | 0.18 | 0.10 | 0.07 | 0.19 | -0.09 |

S: subject, H: hypnotist, S-S: subject-subject correlations, S-H: subject-hypnotist correlations, * p<0.05; ** p<0.01

BOX 24. THE GENETIC BACKGROUND OF THE INDICES OF EXPERIENCES

Mapping the possible genetic background in the area of hypnotic responsiveness is one of the most exciting areas of hypnosis research. Evidently, the study of the genetic factors in the background of hypnotic susceptibility is the most general. Several laboratories have found a relationship between the polymorphism of the Val¹⁵⁸Met of Catechol-O-methyltransferase (COMT) gene regulating the degrading of dopamine and susceptibility to hypnosis (Lichtenberg, Bachner-Melman, et al., 2004; Raz, 2005; Szekely, Kovacs-Nagy, et al., 2010). In collaboration with the Laboratory of Psychogenetics of ELTE, our Laboratory has demonstrated the additive effect of the G allele of the COMT gene: hypnotizability proved to be the highest in the Val/Val genotypes, it was the lowest in the Met/Met genotypes, and was in between in heterozygotes (Szekely, Kovacs-Nagy, et al., 2010).

It was an evident next step to look further and examine the candidate genes that can have an association with hypnosis-related experiences. Gene variants related to the dopaminergic and serotonergic systems seemed to be appropriate candidate genes in the background of the experiences. This topic was summarized by Katonai and Veres-Székely (2012).

The regulation of the level of prefrontal dopamine is fundamentally determined by COMT, as the sole degrader of dopamine in this area. The two alleles of the genotype Val¹⁵⁸Met genotype for COMT degrade dopamine with different effectiveness, thus, in the case of G allele – due to a more efficient enzyme activity –, less dopamine can be expected in the prefrontal area, while the opposite is true in the case of A allele. This difference can be related to several psychological characteristics, like executive functions, temperament, substance usage, emotional stability, and impulsivity.

Of the gene variants responsible for the transmission of serotonin (5-hydroxytryptamine, 5-HT), the genetic laboratory picked *5-HTTLPR length polymorphism*. The two alleles of this gene, the short and long variants, regulate serotonin reuptake from the synaptic cleft differently. The short (14 repeat units) variant results in less activity than the long (16 repeat units) variant. Depression, mood disorders, and differences in dealing with stress have been raised as psychological associates of this gene.

In order to collect a large number of data that is necessary for these types of studies, the psychogenetic study of phenomenological differences was carried out together with

standard hypnosis sessions (WSGC, Bowers, 1998) on a sample of 136 healthy, genetically independent students (27% males, 73% females, mean age 23.4 ± 4.17 years). In addition to the standard (subjective) scores, trained observers also scored the performance of the different test suggestions (in accordance with the general practice in our laboratory); thus, hypnotic susceptibility was characterized by two indices, by a *subjective score* and an *observer score*.

DNS-samples were taken non-invasively from the volunteering participants, and subsequently, COMT and 5-HTTLPR genotypes were determined by the Molecular Genetics group of the Semmelweis University.

The AIM, PCI, and DIH tests completed by the participants immediately after the hypnosis session served for the purposes of phenomenological indices.

The examination of the association between the means of the phenomenological indices and the genotypes revealed a significant relationship between the Dependency need subscale of AIM and COMT ($F(2,133)=3.603$, $p=.030$, $\eta^2=0.051$, $\text{power}=0.658$). This implies the additive effect of the G allele: In cases of GG genotype, the mean of the Dependency need of AIM was the highest (3.31 ± 1.61), in the cases of AA genotype it was the lowest (2.33 ± 1.19), while in the group of heterozygotes it was in between (2.88 ± 1.60). This result is in agreement with the fact that the role of COMT has come to the fore in relation to other dependencies (e.g., alcoholism, substance abuse), too (Demetrovics et al., 2010).

The possible genetic background of the phenomenological data was the most vividly illustrated by the analysis in which the different phenomenological scales were transformed into a common scale, and the resulting standard scale values were shown along the individual polymorphisms of COMT (Katonai and Veres-Székely, 2012).

The figure clearly shows the additive effect of allele G: When it is present, the reports on the hypnosis related subjective experiences and on the phenomenological characteristics indicating positive relational patterns are more intensive. (The Tension subscale of DIH did not prove to be consistent enough in this case, this is why it is absent from the analyses and the figures.)

In the association studies carried out on the 5-HTTLPR polymorphism, there was a significant relationship only with the Intimacy factor of DIH (see Figure box 24.2.). Genotypes explained 5.7% of the scores on the Intimacy scale with sufficient power: $F(2,120)=3.63$; $p=.03$; $\eta^2=0.057$; $\text{power}=0.66$.

According to a *post hoc* analysis (combining carriers of the 14 allele and contrasting them with the non-carriers of the short variant), carriers of the short (14 repeat units) allele ($N=78$) scored significantly higher on the Intimacy scale of DIH than those not carrying this allele (mean of carriers= 2.32 ± 0.72 , mean of non-carriers= 2.00 ± 0.64 ; $F(1)=7.295$; $p=0.008$). The combined 5-HTTLPR genotype group (presence or absence of allele 14) explains 5.7% of the total variance of the scores on the Intimacy scale of DIH (with a power of 0.76), which approaches the explanatory power received in the case of hypnotic susceptibility.

All this implies an exciting relationship, namely, that phenomenological characteristics related to hypnosis also have a genetic foundation, on which rich environmental effects and experiences are built – naturally.

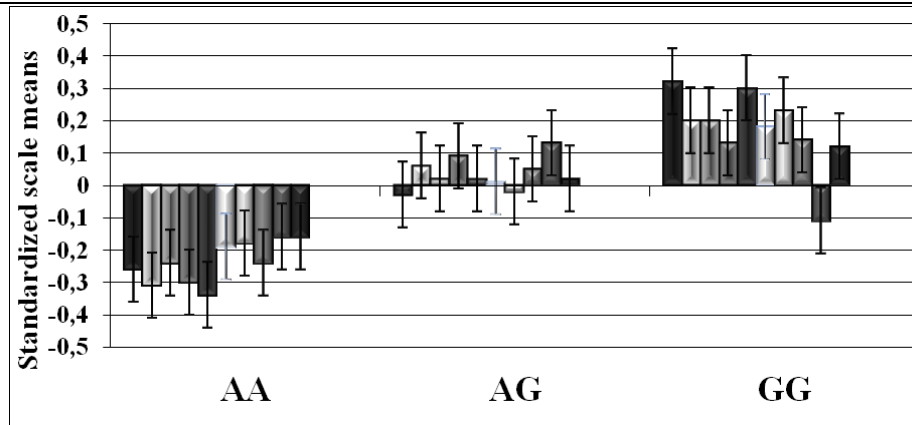


Figure box 24.1. The additive effect of COMT Val allele on hypnotizability and the indices of subjective experiences. The columns from left to right indicate: 1. subjective score of hypnotizability, 2. AIM+, 3. AIM Awe and Attachment, 4. AIM Fear of negative appraisal, 5. AIM Dependency need, 6. PCI Dissociated control, 7. PCI Positive emotions, 8. PCI Negative emotions, 9. PCI Visual imagery, 10. PCI Attention to internal processes, 11. DIH Intimacy, 12. DIH Harmony, 13. DIH Playfulness (error bars indicate standard deviation values) (after Katonai and Veres-Székely, 2012, with the kind permission of the Publisher).

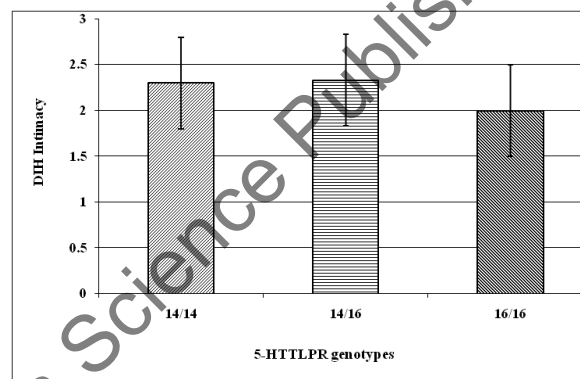


Figure box 24.2. Mean scores on the Intimacy scale of DIH in the three genotype groups of 5-HTTLPR. Error bars indicate SD (after Katonai and Veres-Székely, 2012, with the kind permission of the Publisher).

Comparing the highly significant correlations between the members of MZ twins with the correlations between the scores of MZ subjects and their hypnotists, an interesting picture emerged. The members of MZ twins (but nobody else) correlated highly on the DIH scores with *each other* (and not with their hypnotists), in spite of the fact that they interacted with two different hypnotist. They seem to have evaluated the session similarly to their co-twins, and not with reference to the person they were actually interacting with. We may suppose that they brought their own “interactional model” into the hypnotic situation (Burgoon, Stern, and Dillman, 1995).

It is surprising, though, that the key variable of hypnosis research, *hypnotic susceptibility score*, did not show the same similarity in cases of MZ twins. As the scores on the SHSS:A

are based on behavioral manifestations, this implies that close or similar patterns of subjective evaluation of the interaction (expressed by DIH) can be connected to different behavioral scores, and vice-versa: The same behavioral score may hide divergent patterns of evaluation.

Behind this pattern of data, two types of interactional processes could be hypothesized. MZ twins can be similar to each other while evaluating the hypnosis session, because they follow the *reactive interactional* pattern: The environmental effects (in this case, the standardized hypnosis session with two different hypnotists) may appear to them as something subjectively (almost) the same. The other possibility is that – following the rules of *evocative interaction* – the two members of MZ twins evoke (almost) the same reaction from their interactional partners (in this case, from their hypnotists). In this latter case, the independent hypnotist hypnotizing the members of MZ twins should give similar scores to each other, as the members of MZ twin evoke similar reactions from them. To test this possibility, we correlated the scores of the two hypnotists who hypnotized the members of the twins (or siblings or parent-child pairs). All of these H-H correlations proved to be close to zero and nonsignificant (see Appendix XIII/b for details). In cases of MZ twins, our data seem to support the *reactive interactional* pattern, rather than the *evocative interaction* pattern.

Unfortunately, our data tell nothing about the question whether this phenomenon is hypnosis-specific, or MZ twins would give the same concordance with each other while interacting with two different partners in some non-hypnotic settings (chess, music, sex, etc.), too.

Nova Science Publishers, Inc.

OXYTOCIN SYSTEM AND HYPNOTIC INTERACTION¹

Central oxytocin, the effect of oxytocin on the *central nervous system* became a subject of scientific analysis only in the recent years (Kendrick, 2000; Ludwig and Leng, 2006; Sabatier et al., 2007). There are many data indicating that *certain brain areas are directly sensitive to oxytocin*; this means that beyond being a hormone acting on the periphery, oxytocin is also a neurotransmitter, a neuromodulator in the brain (for a summary see Leng and Ludwig, 2008).

Beyond the peripheral effects of uterine contraction and milk ejection, building on the central system, there is a third basic function of oxytocin, namely, its role in the regulation of **social affiliation** (Insel, 1992). Several forms of behavior belong to this circle, for example, parental behavior and the complementary attachment behavior of neonates (e.g., clinging, isolation vocalization) attachment behavior in reproduction and couple bonding with many of their elements: clinging to each other, seeking the proximity of each other, grooming, caretaking, licking the mate, etc. (Insel, 1992; Insel and Winslow, 1998).

The **psycho-emotive function** of oxytocin began to be outlined in the past few decades, which is related mostly to the central oxytocin system. This function regulates affective, social processes. Oxytocin reduces anxiety and fear (Huber, Veinante, and Stoop, 2005), and decreases depression (Uvnäs-Moberg, Bjökstrand, et al., 1999). Within the social function, it does not simply reduce antisocial behavior, but promotes both the provision and the acceptance of social support (Grewen, Girdler, et al., 2005). It increases trust (Damasio, 2005; Kosfeld, Heinrichs, et al., 2005; Zak and Fakhari, 2006). It strengthens social behavior, and even reduces repetitive symptoms in people with autism (Hollander, Novotny, et al., 2003).

Reducing stress is one of its outstanding effects. As opposed to the masculine type of fight or flight response, the coping strategy based on oxytocin generates a totally different series of reactions. The elevated level of central oxytocin decreases the neuroendocrine stress-response and, consequently, plasma cortisol level. The stress-induced activity of the oxytocin system sets into motion a behavioral response pattern that is different from traditional coping.

¹ This research has been conducted together with Zoltán Kekecs, the biochemical analysis was done by Krisztina Kovács. Our results and further details of the study are also available in Varga, K., Kekecs, Z. (submitted): Oxytocin and cortisol in hypnotic interaction. Paper submitted to the International Journal of Clinical and Experimental Hypnosis.

Above all: Through its *calming* effect, oxytocin-based stress management keeps the individual at rest in the given place.

The psycho-affective function and the method of stress management of oxytocin show that this system is activated mainly in the medium of social support. The individuals face stress calmly and in the proximity of each other. This method of stress management is called *calm and connection* – as opposed to the fight or flight response (Uvnäs-Moberg, Arn, and Magnusson, 2005; DeVries, Glasper, and Detillion, 2003). A similar kind of response was outlined by Taylor when describing the “tend and befriend” stress response, which is characteristic mainly of women (Kulcsár, Rózsa, and Kökönyei, 2004). The adaptive nature of this stress response was emphasized by several authors (e.g., DeVries, Glasper, and Detillion, 2003; Uvnäs-Moberg, 1998a, 1998b; Uvnäs-Moberg and Petersson, 2004; Uvnäs-Moberg, Arn, and Magnusson, 2005).

18.1. RELATIONSHIP BETWEEN TRANSGENERATIONAL EFFECTS AND THE OXYTOCIN SYSTEM

Epigenetic studies dealing with changes acting across multiple generations extensively studied the development of maternal behavior as a function of the level of care received as pups (for a summary, see Champagne and Curley, 2009; in Hungarian: Varga, 2011b). The maternal behavior of the species – usually rodents – used widely in these experiments can be described quite well. Researchers can select females who are especially good in this respect, who engage in much licking and grooming behavior toward their pups: They are the “high licking and grooming” (High LG) mothers. At the other end of the scale are the “low licking and grooming” (Low LG) mothers (Cameron, Shahrokh, et al., 2008).

The target of the oxytocin released as a result of maternal behavior is the ventral tegmental area, that is, the beginning of the mesolimbic **dopamine-system**. The estrogen-sensitive oxytocin neurons of the medial preoptic area (MPOA) are projected directly to the ventral tegmental area. The dopamine level in the nucleus accumbens (a part of the mesolimbic dopamine system) increases in the course of caring for the offspring, especially during licking and grooming the offspring. Thus, the estrogen level regulates the sensitivity of the MPOA-neurons toward oxytocin; if it is high, the dopamine system will also be highly tuned through the ventral tegmental area, that is, maternal behavior will have a high rewarding value (Cameron, Shahrokh, et al., 2008).

The difference between the High LG and the Low LG mothers can be traced back to the oxytocin system. In cases of High LG mothers, the estrogen-oxytocin-dopamine system will be highly tuned, as opposed to Low LG mothers. For example, the dopamine level in the nucleus accumbens is higher in High LG mothers than in Low LG mothers. The increase in the central oxytocin receptor level observable during lactation is much greater in High LG mothers than in Low LG mothers. Furthermore, oxytocin level is maintained at a high level by a positive feed-forward system: The activation of the oxytocin receptors increases oxytocin expression. The mechanism are very important from the fundamental levels of maternal tasks, as they help the mother through the period demanding the approach of an unknown, “foreign” object, for neophobia – the fear of new things – has to be overcome. In addition, oxytocin and dopamine also control important reward systems, thus, they play a role

not only in simply reducing anxiety, but in experiencing the pleasure of performing maternal tasks, too (Esch and Stefano, 2005). Thus, the rewarding effects of the oxytocin and dopamine systems affect the behavior of mainly the High LG mothers; Low LG mothers are less rewarded by these systems.

Thus, the maternal behavior of the offspring of the High LG and Low LG mothers are already “determined” in their perinatal period. This is also seen in mice: mouse pups, who had been weaned earlier, as adults, also weaned their own pups earlier. This effect is attributed to the receptor-densities of hypothalamic oxytocin and vasopressin (Curley, Champagne, et al., 2008).

It is an important finding that the fate of the offspring was not determined by their genetic heritage, but by the quality of postpartum maternal care they experienced: If the offspring are exchanged immediately after birth, and the pups of High LG mothers are given to Low LG mothers, and vice versa (this is the so called cross fostering), the pups’ estrogen-receptor levels in the MPOA will conform to the *foster* mothers. The high mutilation level of pups cared for by the Low LG mother silences the majority of the genes that are responsible for the expression of the estrogen receptors, even if their biological mothers were High LG (Champagne, 2008).

The quality of maternal care also determines the **stress-reactivity** of the offspring (Fish, Shahrokh, et al., 2004; Weaver, 2004). Increased activity of the hypothalamic-pituitary-adrenal axis was described in pups of Low LG mothers, which occurred, because the mechanism silencing the system was missing in them.

BOX 25. THE STUDY OF THE PSYCHOEMOTIVE EFFECTS OF OXYTOCIN

Human oxytocin studies have been published in a rapid race in the recent years.

For example, blood samples of couples living together were analyzed; after drawing the necessary blood for base level, the couples were asked to hug each other in the 10 minutes of the experimental phase (warm partner contact). The results showed that the women who reported receiving substantial support from their partner had higher oxytocin levels to begin with, which increased further as a result of the hug. The researchers concluded that more reliable social support goes together with higher oxytocin level in both sexes, but its protective effect as reflected in cardiovascular and neuroendocrine indices is greater in women (Grewen, Girdler, et al., 2005).

In addition to the real social contact, the simple *recall* and imagination of the *emotional states* also seems to be related to the oxytocin level. The *imagination* of a relaxing massage increased, the *imagination* of a sad situation decreased the peripheral oxytocin levels of healthy female experimental subjects. This study also demonstrated that those in good, problem-free relationships could maintain their higher oxytocin levels even in negative emotional states, and the oxytocin level of those who were living in couple relationships increased to higher levels in positive emotional situations than that of those who struggled with relationship worries (Turner, Altemus, et al., 1999).

It was demonstrated that intranasal oxytocin increased positive communication and simultaneously decreased salivary cortisol level as a result of a couple conflict discussed in the laboratory (Ditzen, Schaer, et al., 2009).

The role of oxytocin in the judgment of socially relevant faces is manifested through the amygdala and the fusiform gyrus, within their prosocial frame of effect (Petrovic, Kalisch, et al., 2008). Better recognition ability and the facilitation of affiliation-understanding are assumed in the background of the anxiety-reducing effect of oxytocin (Lee, Macbeth et al., 2009).

There are signs for the manifestation of a transgenerational pattern in humans, too. The plasma oxytocin level during pregnancy showed a relationship with the bonding with the child: Those whose plasma oxytocin level increased during pregnancy developed stronger attachment to the infant than mothers whose plasma oxytocin level exhibited a different pattern during pregnancy (Levine, Zagoory-Sharon et al., 2007).

Oxytocin studies in humans have greatly accumulated in the past few years, in connection with different social situations and effects. The administration of intranasal oxytocin appeared in an increasing number of studies, and several favorable effects of oxytocin input have been verified. Weisman et al. (2012) reported more than 70 studies in the past five years where the favorable effects of oxytocin could be proven in healthy persons or in different clinical samples. Overall, research shows that trust increases, the interaction of couples becomes more sensitive, social fear decreases, and social skills improve in people with autism as a result of oxytocin.

These investigations also examined when oxytocin level changes in children (Feldman, 2003, 2006, 2007a, 2007b). The results showed a complex picture. The oxytocin level increased in the child only if the parent had a high basic level of oxytocin, and high emotional synchrony developed between her and her infant during free play. Thus, high parental oxytocin level and emotional synchrony must be present simultaneously. This leads to a mutual positive experience.

18.2. POTENTIAL RELATIONSHIP BETWEEN HYPNOSIS AND THE OXYTOCIN SYSTEM

On theoretical grounds, it follows from the aforesaid that hypnosis and the oxytocin system may be related. Hypnosis, as a special social situation, works well only in case of great enough trust; this intensity of social stimuli is tolerated by the parties involved only along mutually positive experiences of affiliation, in which case, on the other hand, they – usually – have outstandingly positive experiences.

We have seen that the oxytocin level is closely related to the dopamine system. Dopamine is a central element in the neurobiology of social relationships (Esch and Stefano, 2005). The association between hypnotizability and COMT, the dopamine-degrading enzyme (catechol-O-methyltransferase) was demonstrated in one of our earlier studies (Szekely et al., 2010), similarly to several similar investigations (see Lichtenberg, Bachner-Melman, Ebstein, and Crawford, 2004; Lichtenberg, Bachner-Melman, Gritsenko, and Ebstein, 2000; Raz, 2005; Raz, Fan, and Posner, 2006).

Australian researchers have already conducted the first study about the relationship between the oxytocin system and hypnotizability (Bryant, Hung, et al., 2011). They found that the intranasally administered oxytocin increased the hypnotic responsiveness of subjects

originally low in hypnotic susceptibility more than the placebo control did. Although in the authors' interpretation oxytocin shifted the relationship with the hypnotist – i.e., rapport – in a more favorable direction, they had no direct proof of this.

The aim of our study in this area was to get a clearer picture of the role oxytocin and cortisol play in the hypnotic *interaction*. On the one hand, we extended our measurements to the hypnotist as well: As far as we know, nobody has made such a study before – there was no hit to the search words “cortisol” and “hypnotists”, and to “oxytocin” and “hypnotist”.

On the other hand, we applied procedures (paper-and-pencil tests) that tap the development of the experiential world (interactional and relational experiences in particular) of the hypnotic interaction. We hypothesize that oxytocin and cortisol levels will correlate with the relational experiences, rather than with the behavior-based scores of hypnotic susceptibility. In this exploratory study, however, no distinct hypothesis can be proposed about the nature of the correlation.

18.3. PROCEDURE

Male subjects and hypnotists were included in this laboratory hypnosis experiment. Each of the four hypnotists hypnotized six subjects (two from each of the three hypnotizability groups – low, medium, and high – screened previously by the HGSHS:A) by the SHSS:C (Weitzenhoffer and Hilgard, 1962). Saliva samples were collected before and after the hypnosis session from both the subject and the hypnotist.

Fundamental methodological questions arise in relation to the central oxytocin system. Experimental designs used in animal studies cannot be applied in humans – because of ethical considerations: The central oxytocin system cannot be manipulated directly (e.g., by injecting oxytocin or its antagonist into the brain). Therefore, there are three usual methods in human studies:

- 1.) Oxytocin is administered through nasal spray with placebo as a control, with the expectation that it will pass the blood-brain barrier and can have a central effect. Then some social behavior is measured and the performances of the oxytocin and placebo groups are compared. The problem with the method is that the mechanism by which the oxytocin from the nasal membrane reaches the neural networks that regulate behavior is not known exactly.
- 2.) The basic level of oxytocin in the periphery (plasma, saliva, or urine) is measured, then some kind of social interaction takes place, then the level of oxytocin is measured again. The problem with this method is that it is not known yet how peripheral oxytocin levels correlate – if at all – with central oxytocin levels.
- 3.) The third possibility is the measurement of oxytocin levels from the cerebrospinal fluid. This is the closest to central oxytocin, but it can be assessed only by lumbar puncture, which is an unpleasant, invasive technique.

In our study to be reported below, we tracked the changes in the levels of oxytocin by way of analysis of the saliva. It is an advantage of the saliva-sampling that is it stress-free (or only minimally stressful), it is not invasive, and it does not intervene with the natural flow of

the interaction (as does the nasal spray method). Saliva-based analysis is widely used in psychological and stress experiments, where the study of cortisol (as an indicator of neuroendocrine stress response) and alpha-amylase enzyme activity (as a marker of sympathetic activity) are the most widespread (van Stegeren et al, 2008). According to the literature, saliva samples are suited to determine the level of oxytocin, too (Zak, Kurzban, et al., 2005; Feldman, Gordon, and Zagoory-Sharon, 2010; Weisman, Zagoory-Sharon, and Feldman, 2012).

Saliva collection and sample processing. Unstimulated saliva samples were obtained by using oral swabs (Salivette Sarstedt[®], Germany). Subjects were asked not to eat or drink at least 30 minutes prior to sampling. Oral swabs were held in the mouth for 1 minute then placed into coded collection tubes and immediately frozen and stored at -20°C until analysis. Salivary oxytocin was measured by enzyme immune assay (EIA) (ENZO Life Sciences ADI-900-153). 1.5 ml saliva was precipitated by 1xVol 0.1 M trichloroacetic acid (TCA) followed by C18 SepPack column extraction using acetonitrile:TCA 1.1 mixture. The final eluate was lyophilized by Speed-Vac concentrator and the sample was reconstructed in 300 µl assay buffer (5x concentrate of the original saliva). Salivary cortisol concentration and alpha amylase activity was assessed from the original saliva samples by commercially available kits from Salimetrics (State College, PA, USA).

The administered paper-and-pencil tests. In this study, the following tests were used (for a detailed review of the tests see Chapter 10); the participants filled out the tests independently of each other, immediately after the hypnosis session, in the listed order:

- AIM: Archaic Involvement Measure (Nash and Spinler, 1989),
- PCI: Phenomenology Consciousness Inventory (Pekala, 1982, 1991a, 1991b; Szabó, 1989, 1993),
- DIH: Dyadic Interactional Harmony Questionnaire (Varga, Józsa, Bányai, and Gósi-Greguss, 2006),

The present study also included the following tests:

- STAI: Spielberger's State-Trait Anxiety Inventory (Spielberger et al., 1970),
- s-EMBU: short version of Egna Minnen Beträffande Uppfostran (Swedish acronym, meaning "My Memories of Upbringing") (Perris et al., 1980; Arrindell et al., 1999). It is a paper-and-pencil test consisting of 23 items, asking about the memories of the nature of parental rearing behavior. The persons rate how typical the given item was in their childhood, separately with respect to their mothers and fathers. The test has three factors:
 - *Rejection*: Punishment, shame, emotional coldness or criticism characterized the behavior of parents in the memory of the already adult child;
 - *Emotional warmth*: The person remembers the experience of love, acceptance, and security with respect to parental rearing;
 - *(Over)Protection*: Excessive fear and anxiety characterizes the childhood memories.

The present analysis will not cover the data of PCI, STAI and amylase values. We will focus on the relational measures (AIM, DIH, s-EMBU), and the hypnotic susceptibility value.

18.4. RESULTS

Unfortunately, the saliva samples of only 12 sessions were suited for the detection of oxytocin, due to too small amount of saliva in the samples of hypnotists.

Our results revealed that oxytocin levels slightly decreased in the subjects from pre- to post-hypnosis, while they increased slightly in the hypnotists, but none of these changes reached statistical significance. Cortisol levels, however, decreased significantly after hypnosis both in the subjects [$t(11)=7.67$; $p<.001$] and in the hypnotists ($t(11)=2.51$; $p<.05$) (see Figure 18.1. and Table 18.1.).

The changes in oxytocin and cortisol levels were also correlated with the hypnotic susceptibility of the subjects, and with the relational tests filled out after hypnosis, including the ones administered to the hypnotists (AIM, DIH, and s-EMBU). The pre- and post-hypnosis values and the difference between the two (pre-hypnosis values subtracted from post-hypnosis values) were calculated in both the subjects and the hypnotists.

Because of the small sample size, the majority of the correlations were not significant statistically, so no correlations were found between the hypnotic susceptibility of the subjects and the level of either oxytocin or cortisol (see Table 18.2.).

All the significant correlations that were found, were with the data of questionnaires assessing experiences. The *Communion* factor of DIH showed a relatively high and significant correlation with the subject's increase in oxytocin level ($r(9)=.605$, $p<.05$). Furthermore, the *Emotional Warmth* factor of s-EMBU in the subjects with respect to their parents showed a high and significant correlation with the level of oxytocin increase in the hypnotist (the respective correlations of the father's and the mother's *Emotional Warmth* in s-EMBU were $r(9)=-.879$ [$p<.01$] and $r(9)=-.850$ [$p<.01$]).

Table 18.1. Mean oxytocin and cortisol levels and standard deviations before and after hypnosis in subjects and hypnotists, t-values of testing the significance of the amount of change, degrees of freedom (df) and p values

| | | | Mean | SD | t | df | p |
|----------|-----------|--------|------|------|-------|----|------|
| Oxytocin | Subject | before | 1.97 | 2.14 | 0.65 | 10 | .528 |
| | | after | 1.48 | 1.48 | | | |
| | Hypnotist | before | 3.03 | 1.84 | -1.32 | 8 | .223 |
| | | after | 4.17 | 3.48 | | | |
| Cortisol | Subject | before | 5.23 | 1.92 | 7.67 | 11 | .001 |
| | | after | 2.74 | 1.23 | | | |
| | Hypnotist | before | 4.68 | 2.54 | 2.55 | 11 | .027 |
| | | after | 2.92 | 0.83 | | | |

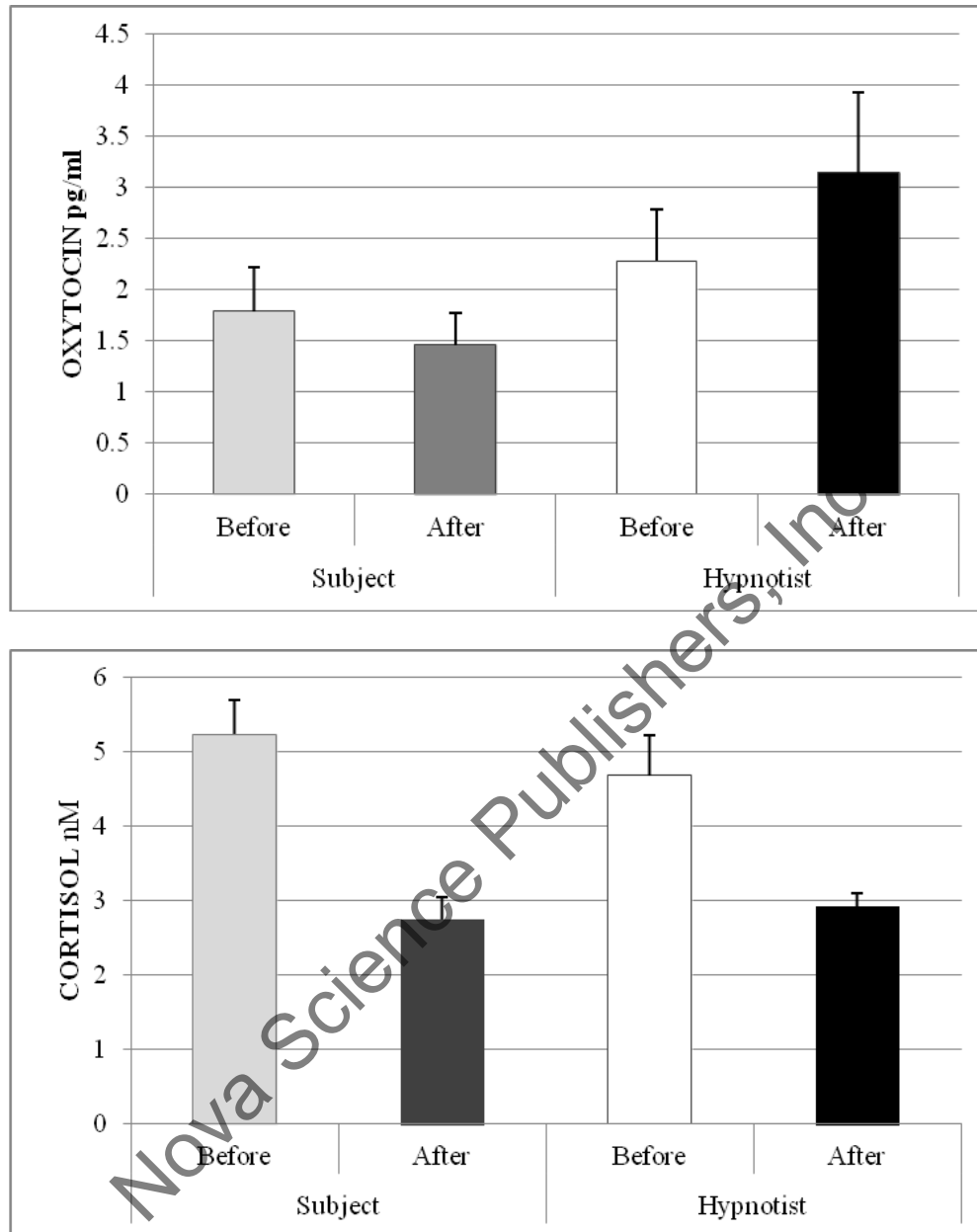


Figure 18.1. Levels of oxytocin and cortisol before and after hypnosis.

Of the tests referring to the current interaction and filled out by the hypnotists (AIM, DIH), there was a significant negative correlation between the *Intimacy* score of DIH and the subject's post-hypnosis oxytocin level: $r(12)=-.678$; $p<.05$. There was an also negative significant correlation between the hypnotists' pre-hypnosis oxytocin levels and the hypnotists' AIM scores: $r(9)=-.723$; $p<.05$.

Regarding the cortisol levels and the relational tests (AIM, DIH, s-EMBU), only the AIM scores of the hypnotists showed a significant (and high) correlation with the post-hypnosis cortisol levels: $r(11)=.832$; $p<.01$.

Table 18.2. The correlations (Pearson's r) between the subject's hypnotic susceptibility (SHSS:C) and the oxytocin and cortisol levels of subjects and hypnotists. None of the correlations are significant

| | | Subject | | | Hypnotist | | |
|----------|-------------|------------|-----------|------------------|------------|-----------|------------------|
| | | Before (B) | After (A) | Difference (A-B) | Before (B) | After (A) | Difference (A-B) |
| Oxytocin | Pearson's r | -.392 | .145 | .434 | -.346 | -.225 | .045 |
| | n | 11 | 12 | 11 | 10 | 10 | 9 |
| Cortisol | Pearson's r | -.350 | -.161 | .423 | .185 | .287 | -.097 |
| | n | 12 | 12 | 12 | 12 | 12 | 12 |

18.5. DISCUSSION

These results should be treated with great caution, because due to the small sample size and the large number of statistical tests, the probability of making type I and type II errors is great.

Nevertheless, it is noteworthy that even at this small sample size, the highly significant results were found not with the hypnotizability of the subjects, but with the relational indices, especially with the ones that show the harmony between the interactants (as perceived by the subject) and with the ones that show how the subjects remember the emotional warmth they experienced with their parents.

As to the increase of the oxytocin level of the subject, apparently, it is not the archaic charge of the *current* relationship (as measured by AIM) that is important, but the "fitness" of the present relationship for the partners to get into harmony with each other. The higher the subject's perceived communion with the hypnotist, the more the subject's oxytocin level increases.

In the hypnotists we found that the lower their initial oxytocin levels, the more archaic involvement with the subject they report after hypnosis, but this also goes together with higher cortisol levels. In addition to this, characteristic "compensatory" pattern was seen: The higher the subject's oxytocin level by the end of hypnosis, the less intimacy the hypnotist reports (or the other way around: the lower the subjects' oxytocin level, the higher the hypnotists' intimacy values). The greater increase of the hypnotists' oxytocin level, the less emotional warmth the subjects remembers in relation to their parents. The same was not related to the subjects' own oxytocin levels.

It must be remembered that the subjects filled out s-EMBU at the *very end* of the experimental session, after hypnosis, and after the second saliva sample had been collected. This means that no questions primed the subject regarding early childhood experiences; the only instance where childhood experiences could be revived was the age-regression test-suggestion of SHSS:C, but this suggestion calls for school-memories, not parental experiences.

All this may imply that the subject brings his/her early relational experiences implicitly into the hypnotic situation, and in the hypnotist, the oxytocin changes appear in relation to the subjects' paternal and maternal emotional warmth recalled at the judgment of the period of early childhood. It is not irrelevant that the relationship is reversed: In cases of low levels of

warm emotions the oxytocin level increases in the hypnotist, and vice versa. This fits the idea that hypnosis can provide a corrective experience: If the subject remembers little emotional warmth with his/her parents, there is an increased level of oxytocin in the hypnotist. The change we can find in the hypnotist is in accordance with the “calm and connection” reaction pattern – this way, perhaps, the hypnotist can offer the subject a model of acceptance based on trust.

It is also striking that when the hypnotists’ oxytocin levels were low before hypnosis, their archaic relational experiences with the subject were enhanced, and – in view of their increased cortisol levels – this indicated a higher level of stress in the hypnotists. This result might be a biochemical aspect of those strong transferential experiences we recorded in completely different experiments in completely different hypnotists (see Chapter 11, and Varga, Bányai, and Gósi-Greguss, 1995, 1997). It is conceivable that if the prior mood of the hypnotist does not favor attunement to the subject sufficiently, his/her transferential reactions come to the fore.

We can say on the basis this pilot study that it would be definitely worthwhile to study the relationship between hypnosis and the levels of oxytocin and cortisol within an *interactional* framework more thoroughly. It is quite surprising that the neuroendocrine changes in the hypnotists occurred in a “dry”, standard, experimental situation. The relationships expected on a theoretical basis would probably appear more intensively in emotionally more arousing experimental or clinical settings or areas.

It is also worth stressing again that – at least at this sample size – hypnotic susceptibility scored on the basis of behavioral response showed no significant correlation whatsoever with the changes in the oxytocin levels either in the subjects or in the hypnotists.

It also calls for further studies whether the *conscious* experience of mutual attunement is a general characteristic of hypnosis or not. In addition to the extremely high correlations between the subjects’ s-EMBU data and the changes of the hypnotists’ oxytocin levels it is especially interesting that the high correlations between the hypnotists’ oxytocin level and their AIM and DIH scores reflect that the hypnotists got attuned to the subjects. This contradicts the belief that changes in the relational dimension does not become conscious in “naïve” interactional partners (see Csűrös (2011), Box 21, and Chapter 21). Other data in the literature often show behavioral or brain imaging changes in social situations upon changes in the oxytocin level without any trace of them in the subjective experiences (Macdonald and Macdonald, 2010). In view of our finding, hypnotists demonstrate greater self-reflection and awareness of their relational emotions than that. But this can be expected on the basis of both their professional skill, and the emphatic relational approach to hypnosis in Hungary.

PART VI: DISCUSSION, OUTLOOK

INTRODUCTION

The closing part will discuss the *mechanisms* through which hypnosis can provide a corrective relational experience. It will be important in this respect that the *verbal* suggestions of the hypnotist can influence the *imagination* of the hypnotized person, which may lead to an *experientially realistic experience*. All this raises the possibility that the hypnotic relationship can really serve as a holding force.

It is already obvious at this point, that hypnotism (the act of hypnotizing) is much more than giving hypnotic suggestions (or just reading them, for that matter). We will examine the *demands* a hypnotist must meet in order to satisfy the role undertaken within the framework of the “hypnotic relationship”.

Naturally, we cannot leave out embedding our results within a broader framework, the main lessons clinical application can learn from experimental hypnosis research, summarizing the strengths and weaknesses of our studies, and outlining some possible future research directions.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

THE HYPNOTIC RELATIONSHIP AS A CORRECTIVE EXPERIENCE¹

Thinking about hypnosis moved on from the idea of animal magnetism and searched for the essence of hypnosis “around sleep”; accordingly, several hypnosis-induction techniques today build on tiring the eyes, or simply ask the subjects to close their eyes at the very beginning (Rhue, Lynn, and Kirsch, 1993). Thus, the hypnotic relationship takes place in a very special context. Its two main characteristics are as follows: (1) The eyes of the subject are closed, (2), the hypnotist talks continuously (after rapport-formation) from the beginning of hypnotic induction to the end of dehypnosis, and basically s/he determines when the subject can talk (and about what). It is noteworthy that in order to maintain the experience of control in hypnosis, it is vision and speech that is suggested by Frauman, Lynn, and Brentar (1993) to be given “back” to the subject: “You will be able to *talk with me* when you wish and *open your eyes* at any time to see that I am still here” (p. 112, emphasis added).

Discussing the relevant elements of hypnosis, Barnier and Nash (2008) review the standard protocols used by the modern scales of hypnotic susceptibility. Most of them are also based on eye closure.

The “naturalness” of eye closure is indirectly shown by those *exceptional* cases in which the person to be hypnotized is unable to or should not close his/her eyes. An example of the former is the schizophrenic patient of Sanders (1993), who was terrified even of the idea of closing his eyes, so he stared at one of the books on the bookshelf while under hypnosis. An interesting example of the latter is the standard hypnotizability scale developed for the deaf, in which a research assistant warned the subjects – by a prearranged touch – if their eyes closed accidentally, because their task was to watch the video recording of the standard suggestion translated into sign language (Repka and Nash, 1995). Evidently, eye closure was to be avoided in the case of an aircraft pilot who controlled his anxiety at landing by self-hypnosis successfully. In order to apply this method successfully – first in flight-simulators then in real flights – he received special suggestions to keep his eyes open during self-

¹ This chapter is an English version of my chapter: Varga, K. (2012) „Csukott szemmel hallgatlak...” – a hipnózishelyzet sajátosságai és a korrektív kapcsolati élmény kérdése. In: Varga, K., Gósiné Greguss, A. (szerk.) *Tudatállapotok, hipnózis, egymásrahangelődés*, L'Harmattan Kiadó, Budapest, 179-200. Translated here with the permission of the publisher.

hypnosis and that he would be able to focus his attention to the task appropriately and be highly alert (Crawford and Barabasz, 1993).

It must be mentioned that in hypnoses with children, open eyes may be quite natural, the rite of “formal” hypnosis may be totally missing in their cases, and (hypnotic) suggestions can be administered in seemingly “waking” conversation with them. Of the eye-related physical signs characterizing children’s trance state, Kohen and Olness (1993) emphasize that the eyes may be open, but gaze is fixed, and blinking is absent. These characteristics make it evident that although the children’s eyes are open, they do not “see” in the traditional sense; the usual patterned information uptake from the environment is suspended during this time.

Unique relational characteristics hallmark hypnosis in both respects (subject’s closed eyes and hypnotist talking): There is barely any other situation in which one of two non-sleeping individuals is watching the other continuously while the other’s eyes are closed; and there is barely any other face-to-face dyadic interaction where both partners are capable of talking, yet only one of them talks to the other.

Covino (2008) makes the following noteworthy remark regarding the special situation of hypnosis:

“One of my teachers said that the great advantage of using hypnosis in psychotherapy was that *the patient had to be quiet* and listen to the therapist, as long as the therapist wished as he exhorted him to change” (p. 620, emphasis added).

This is all the more interesting as research has shown that in order for interpersonal synchronization to occur, it is important to have *visual* contact between the interactional partners – i.e., they should see each other; it is not enough to have continuous verbal contact (to talk to each other) without seeing each other. The study of four months old babies revealed that the so called “social brain” areas (superior temporal sulcus, fusiform gyrus, orbitofrontal cortex) are activated only if there is an appropriate stimulus, that is, another living face looking directly at the infant; even a living face looking elsewhere is insufficient (Feldman, 2007a). Verbal contact may deepen rapport, but it is not enough for the development of coordination of rhythm (Richardson, Marsh, and Schmidt, 2005). It appears that the partners “give up” this possibility of enhancing synchronization in a hypnosis situation, although the rules of the game could easily include the presence of visual contact (see active-alert hypnosis as an example; visual contact is, or at least may be preserved there).

Apparently, the interactional partners in the hypnotic relationship thus divide the channels that are available to both of them in natural dyadic communication situations: The subject “listens” (hears), the hypnotist watches (sees). This division is quite peculiar: The subject goes (ventures?) into the “territory” of the hypnotist, where she soon finds herself in a situation where she cannot use vision, the most informative channel about the emotions and intentions of her partner. *Touch* does not appear in the general situation of hypnosis – apart from a few exceptional cases (e.g., Vas and Császár, 2011). Both the hypnotist and the subject use only a very limited set from the otherwise very rich repertoire of *postures* and *gestures* (Argyle, 1988). What remains for both of them is the rarely conscious, but proven regulating channels of interactions (like smell; see e.g., Fernald and White, 2000). Varga S. says with reference to her work as a hypnotherapist:

“In my work as a therapist I often rely on my olfaction. I could not describe it in words, but I know the smell of anxiety and fear (I feel they smell differently), gender, joy, and many others, but oftentimes I am not aware of this information” (Varga S., 2008, p. 266).

19.1. DETERMINATIVE CHANNELS OF SOCIAL RELATIONSHIPS

High rate of gaze is one of the most important characteristic of intimate relationships (next to proximity and self-disclosure). Visual stimuli are already important in the earliest period of life: Orientation toward the mother by, and the proximity-seeking behavior of the newborn are mainly guided by this channel in our species (as opposed to other species, where olfaction plays a critical role). This sense organ is refined enough for exact discrimination, even for the identification of the mother (Polan and Hofer, 1999). Human newborns are interested in the human face from the very first moment of life; some researchers assume an inborn template that helps to pay special attention to the human face (Argyle, 1988). Facial expression is one of the most importance sources of decoding the feelings of others (Magai, 1999). The face of the mother as a visual stimulus is of key importance in the development of the child: It reflects the mother’s attention, interest, and turning toward the baby.

Exchange of gazes and conversational management in live situations determine who, when, and how long is allowed to look at the other exactly; the partners regulate by non-conscious methods who talks, when, and how the floor is given to the partner (Cappella, 1994). “Normally”, the listener should look at the talking partner 75% of the time, and they should spend 30% of the time in mutual eye contact, especially if there is no target-object around them at which they could both look (e.g., piece of work, map, food, etc.; see Argyle, 1988). Goodwin (1984) even says “When a speaker gazes at the recipient, that recipient *should be gazing at him*” (p. 230, emphasis added). If this is absent, the talker looks for some explanation for the deviation from the strict rule (in the example analyzed by the author, the listener was just measuring the soup from the bowl, and this activity “relieved” him of looking at the talker continuously). If there is no mutual gaze, the listener indicates in a different channel (e.g., nodding) that he is following the talker. Thus, the rule of eye contact applies to both partners, and its violation also affects both of them.

Gazing at the other also depends on status: We rarely look at high-status partners, and look at low-status partners only minimally, while we look at medium-status partners for a relatively long time (Giles and Street, 1994). According to Cappella’s (1994) analysis, gazing at the face of the other – especially prolonged gaze – indicates that the internal world of the other is interesting for us and we wish to look “behind” the words. Open, prolonged gaze sends the message of this intention toward the person being “watched”. Increased rate of gazing characterizes positive social situations (at opposed to neutral ones).

Argyle (1988) argued that visual modality, looking has many elements; within this, the role of gazing is not so much signaling – *sending* information – as seeking and *picking up* information. An extremely large amount of information would arrive from the visual channel: facial expression, blinking, gestures, shrug, adaptors, etc. This is what the subject dispenses

with, as if accepting that in this situation, it is not the partner (the hypnotist) that is important, but the subject himself, his internal world, accompanied by the finely composed verbal manifestations of the hypnotist.

Vandenberg (1998a, 1998b) mentions *gaze* and meaning-identifying *vocalization* as the pillars of the communication act between infant and caregiver. The common reference point can be ensured by the change of gaze, that is, by looking at the object and the partner alternatively. When the infant is in an uncertain situation, it searches for the gaze of the caretaker immediately (by looking at the caretaker, of course). In case of mistaken or ambiguous messages, the infant's other instrument for gaining the attention and cooperation of the partner is vocalization, increasing it persistently until the infant reaches its aim. In hypnosis, the subject gives up all this.

This is still not enough! In the hypnotic situation, the subject also "agrees" to the other watching him continuously. While mutual gaze is a sign of intimacy, mutual attraction, and openness, "one-sided" looking at the other is very embarrassing in natural situations (Argyle, 1988). Prolonged gaze is a signal of either dominance or liking the other. Argyle cited several studies that revealed that the amount of time-rate gaze was directly proportional to the "power" of the talker.

Treating psychotic patients with hypnosis techniques, Murray-Jobsis (1993) reported not only that some patients would be very reluctant to assent to closing their eyes during hypnosis, because they would feel themselves defenseless (therefore, they have a choice of keeping their eyes open or closing them), but also that severely disturbed patients would be especially disturbed if someone watched them, because they feel themselves vulnerable in situations like this. Probably, the "embarrassing" nature is manifested in healthy persons, too, its extent may be less or they may control the arising tension better. The straining nature of the "lopsidedness" of the situation is nicely reflected in the report of ones of our hypnotists (as we have already seen it in Chapter 11):

TRH (H3, A12) *"It amazed me again, as oftentimes: I even checked my watch, we were in the 13th minute, I looked at her, and was surprised, that here is this 'complete stranger', I have never seen her in my life, and here we are after some 10 minutes, that she is sitting here with a drooping head, open mouth, relaxed, and, visibly, she really accepts the suggestions. In cases of such stranger experimental subjects the thought always – or at least often – strikes me: How the hell is it? Why/how does an adult give himself up/over? Does hypnosis really exist? Do altered states of consciousness really exist? These ideas struck me again quite strongly today with this girl (pleasant surprise in the hypnotist's voice)."*

The verbal channel is also quite peculiar. It is dominated by the hypnotist from the beginning of hypnotic induction, and although the subject would be able to answer (in some techniques this does take place), the situation is far from following traditional "conversational" rules at the level of verballity. Even the extremely important element of the "listener" signaling that s/he understands and follows what the other says is absent (in everyday situations this signal is given by continuous humming, nodding, or perhaps by saying "yes", "I see", "I understand"; see Argyle, 1988).

Regarding the prosodic elements of speech, it has been demonstrated that slow speech can be observed in cases of very high or very low levels of anxiety. Fast speech tempo

indicates a socially attractive, confidence-generating, sociable, benevolent, and competent partner who has great assertive power (Berger, 1994; Giles and Stree, 1994) – although there are great cultural variations in this. No wonder conversational partners deviate from this favorable situation only if sufficiently justified: For example, if they want to make the partner understand a difficult topic, or if they talk about or discuss an intimate topic. Formal situations also favor slower speech tempo as opposed to the speed of informal speech.

The volume of speech is also favorably evaluated up to a moderate level: extraversion, sociability, emotional stability, and dominance are associated with it. Greater pitch variability is also accompanied by similar characteristics: Dynamism, efficiency, extraversion, and benevolence are associated with this dimension (Argyle, 1988; Giles and Street, 1994).

According to Burgoon (1994), our western culture relies mainly on visual information as compared to auditive information (this is the so called visual primacy effect), especially women. Vocal information comes to the fore if we suspect deceit, if we are working with contradictory messages, or in relation to dominance, fear, assertiveness, or sincerity.

Analyzing the neuropsychological background of the hypnotic situation, Spiegel (2003) pointed out the significance of closing the eyes (not essential, but general feature of hypnosis): It inhibits the posterior vigilance attentional center proximate to the occipital cortex, and attentional balance is shifted anteriorly. This makes it possible to process imagery as if it arrived from reality, from the outside. Thus, the situation usual in the waking state is reversed in hypnosis: “In a trance, we accept verbal input relatively uncritically (suggestibility), but are capable of transforming images and perceptions” (Spiegel, 2003, p. 135).

The neuropsychological model of hypnosis assumes different events in different phases of the process of hypnosis in the brain mechanisms. The moment when the external visual information is excluded upon the subject's eye closure plays a key role here (Ray and De Pascalis, 2003). According to the model, the process of hypnosis can be divided into three phases in a hypnotizable person from the aspect of neuropsychology. In the first phase, focal attention and sustained attention linked to left- and right-frontal brain functions, respectively, are determinative. This makes the subject able to focus attention on some small target persistently, excluding all disturbing stimuli. In the second phase, when the eyes close as a result of relaxation and fatigue, the frontal areas become inhibited. From this point on, the temporary suspension of the anterior executive functions leads to the overshadowing of reality orientation and critical analysis. In the third phase, cortical activation is shifted from the anterior to posterior areas and from the left to the right hemisphere, while fantasy and imagery is facilitated and verbal processing falls into the background.

People in most situations mimic the emotions expressed in the face of the interactional partner (this is the so called mimicry phenomenon, see Cappella, 1994), which facilitates emotional attunement. In the situation of hypnosis: The relaxed face of the subject reflects emotions only in extreme cases, but even the slightest wince has outstanding significance. Thus, the hypnotist may increasingly attune to the emotional events taking place in the subject by way of emotional mimicry as well. The subject (patient), on the other hand, is temporarily disconnected from the hypnotist on this channel, and is “forced” to rely on the verbal suggestions. This combination – the deprivation of vision, a primary modality in natural situations, and the continuous, but usually unilateral verbal contact – facilitates the subject to pay closer attention to the suggestions (as they are the main points of orientation in

the situation). “Hypnotized individuals allow the hypnotist’s voice to hold sway, joining the hypnotist in cooperative intersubjectivity that is predominantly structured by the hypnotist” (Vandenberg, 1998b, p. 341).

Oakley (2008) reviewed those studies that analyzed the situation of “*neutral hypnosis*” from a neuropsychological perspective. These studies wanted to find out the characteristics of the hypnosis situation itself, that is, when the person is after hypnotic induction, but no specific suggestion (e.g., motor suggestions or imagery) is given yet. According to the findings, “hypnosis” itself is accompanied by the extensive activity of the occipital region, which is consistent with what the persons in such trance states report, namely, that they have vivid spontaneous visual imagery activity. Incidentally, they can be easily distracted from this imagery by external influences, for example, by stimuli administered in some of these experiments. Relying on these results, it can be assumed that environmental stimuli could be similarly disturbing.

After comparing hypnosis and the non-hypnotic waking states, Barabasz and Barabasz (2008) also emphasized that while in the waking state “we generally respond to images and manipulate words, but when deliberately hypnotized (as in heterohypnosis rather than spontaneous hypnosis) we respond to the words of the hypnotist to manipulate images” (p. 347). Szendi, Kovács, et al. (2009) found semantic processing more precise and efficient in hypnosis than in the waking state, that is, the hypnotized person processes verbal suggestions directed toward him with greater efficiency.

This is all the more striking as more and more neuropsychological data show that the brain correlates of “events” taking place as a result of suggestions are the same as those of real perceived events (Oakley, 2008). To put it more clearly, the “reality” described by suggestions produce experiences that are close to actual reality – if we accept that neuropsychological indices have power to validate experiences.

So, modern data seem to support the classics of hypnosis research.

For example, this is exactly what Tellegen (1978-79) put into his definition of “hypnotic experience”: “It is the ability to represent suggested events and states imaginatively and enactively in such a manner that they are experienced as real” (p. 220).

The togetherness of subjective and objective reality is expressed in Orne’s definition of trance logic characteristic of hypnosis, too (although he never wrote it down, he always voiced it informally): “peaceful co-existence between illusion and reality” (cited by Kihlstrom, 2008, p. 36).

So, neuropsychological analyses consistently demonstrate that the hypnotist may build her verbal suggestions on the heightened spontaneous imagination activity characteristic of the subject’s state and on the diminished verblivity and reality control of the subject; the subject’s imagery may then take direction and content along these suggestions. In view of the results of modern brain imaging procedures, all this reinforces the view explicated by Freud that primary process thinking is typical of topographic regression, when *images* come to the fore instead of thoughts. This results in a shift toward emotion-lead, symbolic operation, enabling the loosening of defense mechanisms. Transference processes may come to the surface in the accepting and supporting medium of therapy, emotionally burdensome contents may be approached and even abreacted (Baker and Nash, 2008; Eisen, 1993).

Connecting the above elements, a mechanism is taking shape, namely, that the hypnotist may build her *verbal suggestions* on the heightened *spontaneous imagination activity*

characteristic of the subject's state; the subject's imagery may then take direction and content along these suggestions that can be accompanied by an experience of *reality-feeling*.

19.2. THE TEMPLATE OF RELATIONAL PATTERNS

Cappella (1994), among others, raised the possible existence of a common background factor that both governs early *synchrony* between mother and infant, and is responsible for later secure *attachment*. As we have seen (Chapter 18), (central) oxytocin is a perfect candidate for this role, as it is a biochemical coordinator of affiliative processes.

The *template* of early relational patterns is fixed, and later it will organize the person's social relationship: The person will interpret the actions of others toward him along this template, and will organize his own social behavior along this template, too. These templates lay the foundations of emotional regulation, too – or of dysregulation. Dysregulation developed if the basic experience of the person was that he could not count on anybody in a stressful situation; if there was no caretaker (mother) around who would have reassuringly helped the infant interpret the situations affecting the child, and providing a point of orientation in tense situations. In these cases it is the experience of lack of regulation and disorganization that may be fixed in the child, together with isolation (i.e., that he is alone in the incomprehensible and uncontrollable situations). The operation of templates is unconscious, thus, we have no conscious overview of the processes organized by them; yet these unconscious mechanisms may determine how we enter social relationships: with approach, attack, or withdrawal (see Box 5 on Affective Styles in Chapter 3).

The interpersonal situations of the modification of these templates – like hypnotherapy – are important not only because they help to elaborate, interpret, and put into words the originally overwhelming experiences under the control and security of the social medium, but also because they show a “counter-example” of isolation. The social medium in which the trauma can be approached becomes flesh and blood reality:

“Therefore, one aspect of the repair of trauma is transforming that experience of isolation into one of connection” (Peebles, 2008, p 675).

It is gaze and verbality that provide the pillars of this relationship:

“Through the portal of eye gaze, and the vehicles of voice tone, language, inflection, cadence and self-regulation, we pace and lead the patient to calming, breathing, desensitizing ears, experiencing connection where there was previously isolation. This is the stuff of holding and containment that is essential for reworking trauma experiences, rebounding from re-livings, and rewiring the new templates that interweave new possibilities into the memories of old horrors” (Peebles, 2008, p 675).

In his analysis, Schore (1994) localized the internalized working models that fix the schemata of emotional regulation, that also have a cognitive-affective charge, to the fronto-limbic orbital cortex of the right cerebral hemisphere.

This is the region that takes part in the perception and interpretation of species-specific facial expression, prosody (affective tone and emotionally expressive voice), and gestures, in

the regulation of emotional behavior, in the analysis of the emotional charge of environmental stimuli, and in the mental generation of internal images and facial expressions. In the end, this region of the cortex plays a mediating role between the internal world and the environment in the affective-motivational sphere.

In this system, we have a chance of inducing changes through the corrective relational experiences (as we will explain in greater detail later):

“...The relationship is key. It is through the experience of seeing and hearing into the patient – of creating an experience of resonance inside oneself, of listening from within where the patient is – that one can begin to realize attunement, to the nuances, rhythms, language and emotional movements of the person who sits in the room with us. And it is through this attunement that we can help create the new neurological pathways, between frontal lobes and limbic system, for emotional regulation” (Peebles, 2008, p. 675).

The analysis of the stimulus input – in infancy, typically the face and the prosodic features of the voice of the mother – is organized into a uniform whole and is interpreted primarily from the aspect of emotional tone and then that of matching motivational tendency in the multimodal association areas of the temporal and frontal cortices. In the course of evaluation, the individual matches the characteristics of the incoming (current) stimulus to the templates of the emotional-expressive patterns stored in the right hemisphere. If the stimulus gets a positive evaluation (the face and voice of the mother), the original stimulus is amplified by the activation of the subcortical units in the infant, eliciting a general “pleasant emotional state”, activating the tegmental reinforcement system and increasing arousal. From here, through the hypothalamus, the motivational and action (behavioral) tendencies appropriate for the stimulus (and the arising emotional state) are also activated.

The maturation of this system – and especially that of the orbitofrontal cortex in it – is greatly facilitated by the mutual gaze and prolonged eye contact with the mother in the second half of the first year of life.

If the mother does not fulfill this role of arousal-regulation, either because she is absent, or because she is present, but does not provide sufficiently meaningful stimuli (face, voice) for the developing nervous system of the infant, or causes dysregulation in the infant by overstimulation, the infant will often react with uncontrollable burst of anger to the situation incomprehensible for him. In this case, the left hemisphere will be functionally separated from the unconscious self- and object-schemata in the right hemisphere, because they contain threatening and unmanageable contents. As a result, among other things, the experienced emotional states will be unavailable for the analytical, verbal labeling and meaning attributing functions of the left hemisphere (Taylor, Bagby, and Parker, 1997).

On the basis of all this we can see that Holmes’s statement is not an exaggeration: “an individual’s unique bibliography becomes embedded in the structural biology of the brain” (Holmes, 1996, p. 170).

When the infant is about two years old, the previously mostly positive maternal emotions are supplemented by situations accompanied by the disapproving facial expressions of the mother. The mother expresses that she disapproves something the infant enjoys doing. First, the infant is surprised by this misattunement, for he enjoyed what he originally did. The disapproving feedback from the mother quickly reduces the arousal of the child, and a

differential learning begins in the course of which the child learns by way of feedback from the social partners what is socially expected and recommended, and what is not. This change corresponds to the state of “shame”, maternal feedback produces a state of inhibition and withdrawal, and the former sympathetic-ergotropic activity suddenly changes into parasympathetic-trophotropic arousal (Schore, 1994).

19.3. CORRECTIVE RELATIONAL EXPERIENCE

Essentially, psychopathology can be considered as a limited capacity for stress-regulation; in these cases, the internal reparatory processes of interpersonal situations are deficient. These functions can be localized to the fronto-limbic area of the right hemisphere (Schore, 1994).

In the course of psychotherapy, the natural course of development is taken, but with the provision of a **corrective example**, building adaptive and productive patterns of solutions. The relationship with the therapist provides an opportunity to identify and evaluate the working model developed through the attachment to the early primary caretaker, and then to transform it in a corrective way. This is secured by the relationship with the therapist, which is the basis of correction by providing the pattern of secure attachment.

In order to achieve this, therapist and patient must deeply attune to each other emotionally, when the therapist *resonates empathically* to the emotions of the patient. Perhaps it is the Ericksonian model that is technically the most developed in describing the specific steps the therapist takes to approach the condition of the patient. The aim of the method of *matching* is to make the therapist understand the situation of the client as much as possible, to deepen rapport between them, and begin “to see, feel, hear, and experience the world as clients do” (Lankton, 2008, p. 474). This method is not yet aimed at therapeutic change. Its role is to “maximize contact, understanding, rapport, lower resistance” (Lankton, 2008, p. 476).

This deep relationship evokes archaic relationship patterns in the patient, and the correction of the developmental line stalled in real early development gets a chance.

This archaic relational pattern is organized along mechanisms of transference and countertransference. The therapist, staying open to the signals arriving from the patient, allows that different emotional images and feeling arise in him, including even sensations in the internal organs. This phenomenon appears in the clinical literature in several places.

The case study by Bányai (2008b) is a good example of this process. She worked with a patient with ulcerative colitis, and they were looking for the background of the symptoms by the affect bridge technique. The sign that they arrived at a critical point appeared in the behavior of the patient and the bodily reactions of the hypnotist in the very same moment:

“When she went down on the stairs leading into her past, to an earlier age, suddenly, I noticed complex bodily changes in her. She became pale, her breathing stopped, perspiration appeared on her forehead. At this moment, I suddenly felt a sharp pain in my colon, at the very same spot where she usually had pain. I asked her to stop there and look around” (Bányai, 2008b, p. 551).

This means that the therapist literally reacts emotionally, “becomes available”, providing her own emotional reactions as a basis for corrective experience.

Other descriptions highlight the similarities between the images:

My mental posture, like my physical posture, is not one of leaning forward to catch the clues, but of leaning back to let the mood, the atmosphere, come to me – to hear the meaning between the lines, to listen for the music behind the words. As one gives oneself to being carried along by the affective cadence of the patient’s session, one may sense its tone and subtleties. By being more open in this manner, to resonating to the patient, I find pictures forming in my creative zones; *an image crystallizes, reflecting the patient’s experience*. I have had the sense, at such times, that at the moments when I would pick up some image of the patient’s experience, he was particularly ripe for receiving my perceptions, just as I was for receiving his. An empathic channel appeared to be established which carried his state or emotion my way via a kind of affective ‘wireless’. This channel, in turn, carried my image back to him, as he stood open in a special kind of receptivity” (Hammer, 1990, cited by Schore, 1994, p 452, emphasis added)

In a similar vein, Peebles (2008) describes the process as the therapist lets the signals from the patient “go through” him, enabling him to give meaning to them to reflect them back:

„It is helpful to listen carefully as the patient speaks – to open oneself to the experience of the patient’s speaking, momentarily toning down the precise tracking of each word. When rapid (even lively seeming) verbal agility does not stir engagement in the therapist, but instead incurs a sort of numbing and dissociation, or an experience of feeling overwhelmed, then the therapist may be experiencing a sophisticated manifestation of the patients’ dissociation” (p. 654).

All this is topped by the therapist *attaching words to the feelings*, making it possible to put things the patient has never received emotional resonance to, not to talk about verbal label, into words.

This is the experience the patient did not have, or only ambiguously, in the period of early attachment. His basic experience is that he can count on nobody in a stressful situation, the caregiver is not present, or if she is, she is not sensitive and responsive. Thus, the child learns that in tense situations he is left alone without any instrument; many authors link this to the feeling of shame (see Schore, 1994; Magai, 1999; Scheff, 1997 on this topic). This is the pattern the person brings, this what he “uses” even decades later: He is not looking for a partner or relationship to solve or treat similar situations. The experience of shame calls for the need for hiding, and is accompanied by the inhibition of emotional expression.

Sanders (1993) compares it to the *shared inner space* situation of Winnicott when the sketchy metaphor started by the hypnotherapist (e.g., a images of a walk on the beach) is filled by the real experiences of the patient, eliciting emotions from his past, then the therapist reacting to these emotions weaves the image further, may reach the emotions themselves and use them later at an appropriate time.

Self-hypnosis as a rite may serve to evoke the feelings of being together with the therapist, providing the experience of reassuring security for the patient, just as much as the

teddy bear or the security blanket gives reassurance to the child in a difficult situation. “The self-hypnosis induction when repeated at home may be associated with calming, shooting mental image or representations of the therapists that serve much the same function as a transitional object” (Sanders, 1993, p. 256).

BOX 26. THE NATURE OF ATTACHMENT AND DYADIC INTERACTINAL HARMONY

Bácsi (2011) studied couples in various natural, everyday dyadic interactions (conversation, sexual intercourse, joint work) through data-collection via the Internet. The analysis, processing the data of 52 heterosexual couples, used DIH and the Experiences in Close Relationship-Revised (ECR-R) questionnaires to measure attachment dimensions (anxiety and avoidance).

“Secure” and “insecure” attachment style groups were differentiated on the basis of ECR-R; there was a significant difference between the two groups on all of the subscales of DIH: Securely attached respondents scored higher on Intimacy, Communion, and Playfulness, and lower on Tension than the other group (see Table box 26.1.).

Table box 26.1. Mean DIH values of people categorized as having “more secure” and “more insecure” attachment styles, together with the result of t/d values and levels of significance: * p<.05, ** p<.01 (after Bácsi, 2011).

| | More securely mean (sd) (n=44) | More insecurely mean (sd) (n=60) | t/d values |
|--------------------|-----------------------------------|-------------------------------------|------------|
| Intimacy | 4.45 (0.53) | 3.96 (0.85) | d=12.70** |
| Communion | 4.69 (0.29) | 4.38 (0.52) | d=13.77** |
| Playfulness | 4.32 (0.52) | 4.17 (0.53) | t=1.44 |
| Tension | 1.25 (0.29) | 1.55 (0.58) | d=11.84** |

Table box 26.2. The comparison of the groups with different styles of attachment with respect to the subdimensions of DIH (one way ANOVA). (The numbers under the scale names show the serial number of the subgroups between which statistically significant or tendency-level differences were found in pairwise comparisons: +p<.1, * p<.05, ** p<.01) (after Bácsi, 2011)

| | 1. Secure mean (sd) (n=44) | 2. Rejecting mean (sd) (n=17) | 3. Confused mean (sd) (n=18) | 4. Fearful mean (sd) (n=25) | F and W values |
|---------------------------------------|----------------------------------|-------------------------------------|------------------------------------|-----------------------------------|-------------------|
| Intimacy 1-2**, 1-4** | 4.45 (0.53) | 3.8 (1.01) | 4.19 (0.79) | 3.90 (0.78) | 4.56** |
| Communion 1-2+, 1-4**, 3-4+ | 4.69 (0.29) | 4.46 (0.38) | 4.50 (0.58) | 4.25 (0.55) | 5.28** |
| Playfulness | 4.32 (0.52) | 4.07 (0.50) | 4.28 (0.46) | 4.14 (0.59) | 1.21 |
| Tension 1-4**, 1-3+ | 1.25 (0.29) | 1.48 (0.35) | 1.48 (0.55) | 1.65 (0.71) | 4.03* |

Making comparisons among the subgroups of the insecurely attaching group (rejecting, confused, fearful)², it can be seen (Welch test) that the rejecting and fearful subgroups scored lower on the Intimacy and Communion subscales, and the fearful group scored the highest on the Tension subscale (see Table box 26.2.).

19.4. HYPNOSIS CAN ALSO MODEL THE STRESS SITUATION ITSELF

Patient injured in early development are extremely sensitive to the prosody of language. It is the emotional charge, the melody, and the affective tone of language that is meaningful to them, rather than the direct content.

In a therapeutic relationship, the patient receives help to identify and label his own emotions through the “interface” of the therapist. The therapist first evokes then modulates and regulates the negative feelings. By naming the feelings, the undifferentiated and originally non-conscious extremely negative emotions (like shame) become controllable, and they can be expressed in a modulated way (e.g., in the form of verbalized anger). In this process, the interpersonal origin of the all-extensive internalized shame that determines everything can be traced back and corrected.

According to the analysis by Scheff (1997), it is mainly the boys whose environment prohibits the expression of their emotions, especially in cases of feelings implying “weakness”, like shame. This way they learn to “swallow their shame, to deny it completely to the point that it is no longer available to consciousness” (p. 86).

Two persons attune to each other through the connection between the two right hemispheres (Robles, 1998), and this process requires both parties to tune to primary process thinking just as much as it used to be the bridge of attunement between mother and infant in the preverbal period.

The dominant modality of this working method is vision, especially the human face, the emotions expressed in it, and reading it. It is the preverbal elements of linguistic communication – intonation, volume of voice, rhythm – that are determinative.

In this working mode, it is possible to reach the multimodal working models internalized in the early period and saturated with emotions, and this is where it is possible to bring the hitherto unconscious material of experiences to the level of left hemisphere processing (Schore, 1994).

In the course of this work, trustworthy relationship and acceptance, the basic determinants of work in therapy are very important (or rather: indispensable). Most of the patients carried their maladaptive working models “untouched”; therefore, it is understandable that they start a trying internal work only under appropriate circumstances.

² The attachment categories formed on the basis of the ECR-R questionnaires were as follows. *More securely attached* (N=44): Lower than sample-mean scores on the Anxiety and Avoidance dimensions; more *Fearful avoidant* (N=25): Higher than sample-mean scores on both ECR-R scales; more *Confused* (N=18): Higher than sample-mean scores on the Anxiety scale and lower than sample-mean scores on the Avoidance scale; more *Rejecting avoidant* (N=17): Lower than sample-mean scores on the Anxiety scale and higher than sample-mean scores on the Avoidance scale (Bácsi, 2011).

BOX 27. WHAT IS BEHIND THE PERSISTENCE OF POSTHYPNOTIC SUGGESTIONS?

Barber (1998a) wanted to find out how it is possible to extend the effect of hypnosis through appropriate posthypnotic suggestions for weeks, years, and even an undetermined period of time. He showed some cases where patients who had had stubborn, chronic headaches, were relieved of their pain as a result of hypnoanalgesia, and this effect could be extended by posthypnotic suggestions.

He rejected the possible explanation that an altered state of consciousness persisted or were elicited again and again upon some cue, re-producing the analgesic effect. He outlined a mechanism through which the harmful stimulus gets dissociated as a result of suggestion (at the perceptual or affective level), and the nervous system re-trains itself, so to say. As a result, the painful stimuli no longer make the person suffer. It is an essential moment in the persistence of the effect that the result is greatly facilitated by the relationship with the hypnotist – let it be an experimental or a clinical situation.

This points at the fact that the hypnotist as a person and his/her words (suggestions) are especially significant for some subjects/patients. Barber also arrived at the conclusion that this relational dimension is probably less important for the “hypnotic virtuosos”, who can easily “transform” the suggestions into “reality” by the help of their outstanding abilities. For less hypnotizable people, however, the relational element – social support – may be essential.

Eventually, regarding the background of the persistence of posthypnotic suggestions, Barber concluded that the suggested effects can be extended to a period that goes beyond the period spent together with the hypnotist on the foundations of a significant relationship with the hypnotist. Similarly, in the case of self-hypnosis, the patient can extend the effect of hypnosis to a period when the hypnotist is no longer present by relying on the memory of the heterohypnotic relationship.

“The experience of hypnotic relief enables the patient to feel a significant alliance with and a belief in the clinician’s power and ability to help the patient, which then becomes a source of continued nurturance. The hypnotic experience may become an ‘object’ for the patient, almost like a talisman: a procedure that brings comfort and support and ‘makes it feel better’ [...] the relationship between the patient and the clinician is critical. As a result of the nurturing experience of this relationship, the patient more readily incorporates the self-object of the clinician (the voice and spirit of the clinician) into his or her sense of self, which further supports and perpetuates the realization of the clinician’s suggestions” (p. 36).

It must be seen that it is an integral part of this process that the attunement between therapist and patient is sometimes broken, that negative feelings and tension may arise. This is a (favorable) sign of the unconscious schemata coming to the surface and becoming available in its projection to the present therapeutic relationship. The emerging emotions are manifested and named, and it becomes possible to interpret and elaborate them. Sometimes such bursts have a sweeping momentum. At one of the sessions with one of my clients in hypnotherapy I indicated that we must change the usual time of our sessions, because it conflicts with a new regular responsibility I had to engage in. At this moment the client

literally burst out in anger, almost shouted “This is it, because everything else is more important than me...!”, and similar things for a few minutes. Then the client fell silent, the way he looked returned to the here-and-now, and asked: “What the hell was that?”

In cases like this, the excitement of the general energy-consuming, previously unnamable emotional pack interweaving everything is transformed, and the released energy becomes at the disposal of the individual again (or perhaps the first time).

“That is to say, a presymbolic unshared and unregulated visceral affective experience is transformed into a shared and regulated symbolic affective experience.” (Schoore, 1994, p. 466).

BOX 28. THE VOICE OF THE HYPNOTIST

The experimental design of Hangol-6 (see Appendix II/b) offered an opportunity to study the voice of the hypnotists, comparing – on the one hand – their own voices in and outside of hypnosis, and – on the other hand – their voices with non-hypnotists (“simple experimenters”) in the same situation. In these situations, the experimental subjects also talked (both in hypnosis and in the waking state), so the results of their voice analysis could be compared with the indices of their interactional partners.

The recordings were subjected to both acoustic and perceptual analyses. In the former case, the recordings were analyzed by a special software program (*Praat*) for voice analysis (Boersma and Weenink, 2001), providing several indices about the speaker’s voice: fundamental frequency (F0) and its variability (F0-variability), intensity and its variability, and long term average spectrum (LTAS) in the 1 kHz range.

In the perceptual study, relying on the “live human” sensation of the voice recordings, judges were asked rate the given voice sample along six adjectives (*slow, sleepy, loud, melodic, mellow, relaxed*) (Gösi-Greguss, Bányai, and Varga, 2008, 2009). In this study, the raters had no way of knowing that the recordings they had to rate had anything to do with hypnosis, or naturally, in which condition (waking or hypnosis) was the voice recorded.

Interrater reliability (as measured by effective reliability³) of the adjectives was high enough (above .87) for three adjectives (*slow, sleepy, loud*) in the case of hypnotists and experimenters, and for an additional adjective (*melodic*) in the case of the subjects.

The judges found the voices of the hypnotists *slower, sleepier, and less loud* in hypnosis than in the waking condition (see Figure box 28.1.). Interestingly, changes in the voices of the subjects and the hypnotists were found to be similar, and they were also different in hypnosis from the waking state, while no differences between the “waking” and “hypnotic” conditions were found in the case of the experimenters.

The acoustic analysis brought interesting results in *pitch* and *intensity* of the voice (Gösi-Greguss, Bányai, and Varga, 2009). Acoustical analysis revealed that if the voice of the hypnotist was deeper in hypnosis than in the waking condition, so was that of the subject (especially in the cases of subjects of the medium hypnotizability), and if the hypnotist’s pitch became higher in hypnosis, so did that of the subject.

³ Effective reliability = $N \cdot r / 1 + (N - 1) \cdot r$, where N is the number of judges, r is the mean correlation among all the judges.

No such relationship was present between the experimenters and the subjects. This means that there was some kind of attunement between hypnotists and subjects in these voice characteristics, too, but only in a real hypnotic situation (i.e., the subjects “followed” the voice changes of the hypnotists, but did not “track” those of the experimenters).

Voice intensity measurements revealed that the voices of the hypnotists and the subjects decreased markedly in hypnosis, while the intensities of the voices of the experimenters remained the same (in accordance with the intentions of the experiment). This “machine”-analysis also revealed that the hypnotists’ voices become softer in hypnosis (regardless of the hypnotizability of the subjects). However, this softening of the voice is present only in the higher regions of hypnotic susceptibility in the cases of the subjects; this can be attributed more to the (relaxed) state of the subjects than to “following” the hypnotist.

In this experimental series, we could also study the relationship between the acoustical parameters and the results of various paper-and-pencil tests, too (Gósi-Greguss, Varga, Bányai, and Józsa, 2011). The correlational data between archaic involvement (AIM), experiential patterns characterizing the state of consciousness (PCI), and evaluations of the given interaction (DIH) show that the responses to the questionnaires are related basically to the speaker’s own voice only (and not to the voice characteristics of the interaction partner).

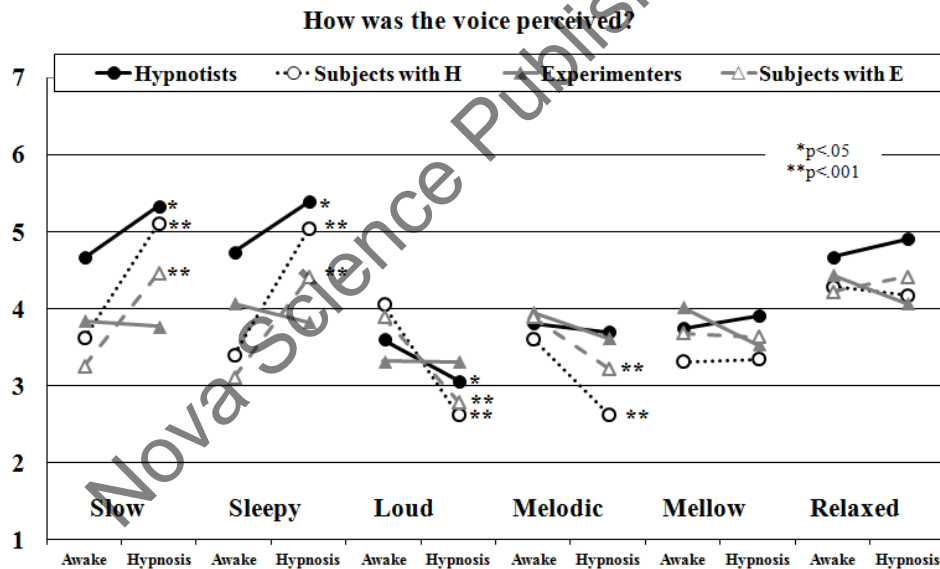


Figure box 28.1. Perception of the voices of hypnotists, subjects with the hypnotist, experimenters, and subjects with the experimenter (after Gósi-Greguss, Bányai, and Varga, 2008).

All this can be interpreted as the “storytelling” tone of the hypnotist’s voice helps the subject experience some alteration of consciousness, where the subject already meets his/her own experiences, independent of the hypnotist’s voice.

For further details, see Gósi-Greguss, Bányai, Varga, 1997, 2010; Gósi-Greguss, Bányai, Varga, Józsa, Suhai, 2004a, 2004b; Gósi-Greguss, 2002.

In sum, we can say that both acoustic (machine) and perceptual (human judges) analysis revealed that the voice of the hypnotist shows characteristic changes in hypnosis: It is soft, slow, and sleepy. Some of these characteristics are followed by the subjects – which can be interpreted as a kind of interactional synchrony – but only in the hypnotic condition, and if the partner is the hypnotist (not the experimenter). The pattern of experiences, however, and the evaluation of the interaction are related to the speaker's own, rather than the partner's voice.

In cases like this, it is not the aim (and it is not worthwhile) to modify the emerging emotion; it is sufficient to place it in the appropriate *frame of interpretation* and attach *meaning* to it. Similarly to mother-child relationships: It is not the aim to relieve the child of all negative emotions, but it is crucial that the caretaker help the child understand the unpleasant feelings occurring naturally in different life situations, to provide appropriate outlet for them, and to provide sufficient assuagement.

As a result of these modifications in therapy, the emotional system of the patient is really and actually transformed. Things that used to be threatening become neutral; things the patient used to expect with mistrust are expected with trust. Situations that used to have no patterns for solution can be coped with more easily.

Interestingly and fortunately, Nature left the possibility for this modification open, as certain plasticity of the nervous system is maintained even in adulthood. In humans, the prefrontal areas and the mesolimbic dopaminergic neurons have some regenerative capacity throughout our lives.

According to Holmes' (1996) analysis, the situation of psychotherapy re-creates the childhood experience when the child is "alone in the presence of other" (p. 15), that is, the child calmly plays alone knowing the reassuring proximity and defense of its mother. The process of free association is the externalized version of inner speech. Continuing this line of thought, the experience of "I listen to you with eyes closed" in hypnosis rhymes with the situation of infants (or even fetuses, perhaps). The analysis of the interactions between newborn babies and their caretakers shows that infants adapt mostly to the voice of the adult caretaker (Cappella, 1994).

Stern (1985) used the expression *attunement* to describe the harmonious and responsive emotional relationship that can be observed between infant and its caretaker. Just as early caretaking expects the mother be both separate and finely tuned to her child, the hypnotist must follow a similar pattern. The hypnotist should be responsive, should recognize the feelings and the needs of the other, and should enter the world of the subject with an array of available methods. The methods in mother-infant relationships include feeding, getting the baby to sleep, nappy changing, play, rocking, calming the baby, etc. The methods of the hypnotist are the hypnotic techniques.

The situation and contextual circumstances of hypnosis are strikingly similar to the way parents tell stories to their children. Bates' (1993) list about the context of hypnosis fits both situations perfectly: peaceful circumstances, soft voice, relaxation, active involvement into the world of fantasy. Krippner (1993) also emphasized the role of healing poems, texts, and songs in traditional cultures, and paralleled all this with the stories observed in the area of hypnosis, for example, with Erickson's teaching stories. According to Lankton (2008), the method of story-telling richly combines almost all basic elements of the Ericksonian method.

Several other approaches within the field of hypnosis apply “tales” or “stories” as healing methods (see, e.g., Rhue and Lynn, 1993; Kuttner, 1988; Watkins, 2000). Parents talk to their children from the very beginning (Argyle, 1988; Cole, 1996); this how the child develops a knowledge of the language, which is essentially social in nature (Klein, 1996). Thus, the typical hypnotic situation models the preverbal period: A competent (“stronger and wiser”) adult (more competent in the area of language, too) talks to a silent recipient.

This line of thought is indirectly supported by Vandenberg (1998b) when he argues that the capacity to enter a hypnotic relationship is present in everyone from the beginning. After reviewing the interactional and communicational abilities of infants, he concludes that

“These communicative features are analogous to that found in hypnosis and other relationships, in which a person of authority establishes the communicative agenda; shapes the patterns of exchange; interprets the meanings of another’s communication; and organizes, orients, and influences another’s behavior, perception, and intrapersonal processes” (p. 338-339).

It is another important difference between **active-alert** and traditional relaxational hypnoses that in the former, the eyes of the subjects may remain open; most of the people do take this opportunity. In addition to the power felt during pedaling, the experience of agency, and the suggestions emphasizing the abilities of the subject, the “*maintenance*” of looking is also an important element, mediating autonomy.

This is a feature that requires the hypnotist to “withstand” this look partly in the practical sense (e.g., that he need not look into the text or his notes), partly in the sense that a prolonged mutual gaze has a deeper meaning: it is one of the strongest signals of intimacy. The high level of verbal intimacy – or example, intimate questions, deep self-disclosure – is usually balanced in the other channels: the partners avoid the gaze of the other; there is less smiling and laughter, etc. Both high level of intimacy and preserved gaze can be kept perhaps between friends who know each other well (Cappella, 1994; Atkinson and Heritage, 1984). And it is active-alert hypnosis where the “friendly” hypnosis style is the most prevalent (Bányai, 2002a).

This was revealed in the subjective report of one of our hypnotists after an active-alert hypnosis session (Varga, Bányai, and Gósi-Greguss, 1999, p. 186):

AAH Q (H) S8/1) “*She has turned to me many times, searching for my eyes, and it disturbed me all along that I had to look at the text. I think she experienced a kind of loneliness, and it was bad for me, as well, it has destroyed our relationship*”

The phenomenon of “I listen to you with eyes closed” can be approached from a larger scale. Prior to hypnosis, and especially afterwards, the subject and the hypnotist look at each other – in accordance with the usual social norms. This can parallel the finding of Feldman and her group (2007a, 2007b), namely, that intensive positive emotional situations – e.g., play – were framed by mutual gaze between the partners. Thus, *before* and *after* experiencing special, positive experiences together, the partners looked into the eyes of each other.

Mutual attunement build on mutual gaze forms the basis of the development of the frontocortico-limbic connections in the brain necessary for being regulated and stabilized emotionally and biologically (Peebles, 2008; Schore, 1994). The reverberation in the visual channel of mutual eye contact also deepens intimacy.

„Like the healing warmth of sunlight on your face, the gentle listening of a trusted other can allow you to slow down, breathe in, and feel the fullness of a deep experience of safety and comfort” (Peebles, 2008, p. 665).

Nova Science Publishers, Inc.

THE HYPNOTIC RELATIONSHIP AS A HOLDING FORCE

Hypnotic relationships – similarly to love (see Hazan and Shaver, 1987) – can be conceived as an *attachment* process. One of the key elements of love, that is, *mutual sharing* – the sharing of feelings and internal experiences – may appear in hypnosis, too, especially in a therapeutic context. This is intimacy itself. It is important that that mutual sharing of feelings can go quite far: “Mutual sharing in these relationships has virtually no limits; it extends into the very core of the lover’s beings, into their whole selves” (Scheff, 1997, p. 61). This draws attention to the importance of paying special attention to the integrity and autonomy of the participants, due to the possible dangers of opening up.

Nevertheless, just as love is not the same as the original attachment situation, the situation of hypnosis can also be very different from the original attachment relationship, or from love. It is useful to follow the same considerations as those followed at the comparison of *love* and *attachment* (Feeney and Noller, 1996):

- *Reciprocity*: How mutual it is what the partners offer each other (e.g., in the area of caretaking)?
- *Symmetry*: How evenly is power distributed between the partners?
- *Sexuality*: Is the situation characterized by an erotic charge?

Re-thinking the hypnotic relationship along these lines, we can see that the hypnotic relationship can take many forms in these dimensions. It can be almost completely mutual, although, basically, caretaking is usually expected of the hypnotist, enjoyed by the subject. Symmetry can also be fully present, as some approaches even stress this emphatically: “We are two experts working together, you are an expert in yourself, I am an expert in the technique” – says the Ericksonian approach during rapport formation (Robles, 2000); in some other cases, it is the direct, authoritarian hypnosis methods (and relationships) building on direct suggestions that are effective.

BOX 29. EROTIC CHARGE IN HYPNOSIS

The early history of hypnosis already raised the issue that erotic impulses may also emerge in the participants of the hypnotic interaction.

The secret report on Mesmer's activity recognized the erotic charge in the healing interaction: The Committee thought that the long physical proximity, the sex difference between the healing male and the female patient, and most of all, touch were responsible for this effect. The situation required close proximity, indeed: The magnetist sat in front of the patient, taking the patient's knees between his own knees, one of his hands touched the patient from the front, the other one from the back, "the two faces almost touch, the breath is intermingled, all physical impressions are felt in common, and the reciprocal attraction of the sexes must consequently be excited in all its force. It is not surprising that the senses are inflamed" (Bailly, 2002, p. 365).

The next memorable "moment" in this respect was when Freud declared, that erotic attraction may come up to the surface in hypnosis, therefore, he rejected the method (Gravitz, 2004). Modern psychoanalysts developed new concepts for the fantasy-based primary process thinking that can be accompanied by a temporary decrease in critical thinking, control functions, and reality-orientation (Pinnell, Lynn, and Pinnell, 1998).

We could think prematurely that the question is no longer an issue, for its occurrence can well be explained (by physical proximity or by an alteration of the thinking style), and that there is no danger of eroticism to appear in the hypnosis situation. Nevertheless, Orne (1965) argued that counter-transference phenomena are more frequent in hypnotherapy than in other forms of therapy that use no hypnosis. Hypnotherapists have greater difficulty in maintaining their objectivity and distance. Their involvement is excessive, in fact, "All too frequently the use of hypnosis is primarily in the service of the therapist's needs" (Orne, 1965, p. 235).

In his paper on the possible adverse side-effects and problematic outcomes of hypnosis, Barber (1998b) notes that he alone knows of 8 highly respected clinician colleagues who got entangled in a sexual acting-out with their patients. "If these reputable, well-trained, and experienced clinicians can get into such trouble, are the rest of us not also vulnerable? (p. 158)" – asks Barber the thought-provoking question. Later, he makes it clear that the method of hypnosis increases occurrence of processes of transference and counter-transference. In fact, he admits that "...if a patient had been tense or anguished, and in response to my treatment is now feeling calm and relaxed, I may experience affection, love, or even erotic feelings" (p. 162).

We have met this phenomenon several times in our experiments. It was a memorable case when a young female subject asked the young male hypnotist coquettishly: "How many times will you hypnotize me? Once for a long time, or several times for shorter times?"

Sufficiently trustful atmosphere reveals that the hypnotists do not remain unaffected even in controlled experimental situations either. For example:

TRH Q (H2, S5) *"I am extremely embarrassed, completely fascinated... she is very pretty, indeed, ... she has beautiful eyes... I had an acquaintance a long time ago, having exactly the same eyes... and the hairstyle... I thought at first that it was*

her, but the name... it was different... As she looked at me I was completely confused... she charmed me.. I didn't know which leg to sit on (laughing)"

Or (see again the part already quoted in Chapter 11.):

TRH Q (H5, S1) *"The brown eyes and the brown hair, it seems to me, deeply influenced me... These kinds of girls have richer emotions, they give themselves up more easily, and they are more easy-going... Her brown eyes were very attractive, indeed."*

Active-alert hypnosis, as the dyadic model situation of increased arousal has quite clear sexual charge sometimes. Thus, we should pay more attention to the emotional charge and/or sexual aspects within the relational side of hypnosis.

Naturally, we should not forget that certain test suggestions in hypnosis may have direct, symbolic, erotic meaning; this can actually be utilized, for example, in the treatment of psychogenic impotence (Crasilneck, 1990). Once, I was administering the arm catalepsy suggestion with the aim of ego-strengthening in mind to a young man; I proposed the goal-directed image of a tree branch that can withstand everything. Performance was positive, but instead of the proposed "tree branch", the young man had a completely different experience. This is how he talked about it in the discussion after hypnosis:

"I don't know, but it was not a tree branch for me, but a boom, the one on a sailing boat near the mast. But it was much less rigid than a boom. In fact, it was quite motile, it appeared to make small twists, it wiggled... even in a small place like half one's palm... still very rigid... really reliable and hard."

Sexuality is completely foreign to the hypnosis situation – at least one would think so. As soon as we looked at this topic, we found a very interesting overall picture (see Box 29 Erotic charge in hypnosis).

Just as the actual *behavior* of the child in the strange situation reflects the relationship between mother and infant – and that can be inferred from the verbal attachment narrative of an adult in an attachment interview (Holmes, 1996; see Box 10 on Attachment styles in Chapter 7) – it is possible that this takes place in the "reversed" order, moving backward (inward) from the descriptions (suggestions) of the hypnotist to the (hopeful) transformation of behavior in real life.

Similarly, just as in adult attachment interviews, the key is the *way* the description is given, in the situation of hypnosis, the "careful crafting" of the suggestions is the key element; it is no accident that many handbooks provide detailed instructions for this (see e.g., Hammond, 1990). Naturally, it is not the surface, but the deeper meaning that is important (or *was* in the case of the adult attachment interview and *will be* in the case of hypnotherapy).

Furthermore: Neurotic symptoms can also be thought of as an interpersonal phenomenon (as opposed to an uncontrollable drive), that is, the "insistent cry for empathy and attachment" (Holmes, 1996, p. 57). Bowlby's theory brought something radically new when he looked for the roots of mental disturbances in interpersonal rather than intrapersonal factors (Fonagy, 1999). He sharply opposed the view that the child's world is "autistic", unsocialized, and self-

absorbed. He thought the human infant is determined by its relationships from the very beginning.

The question arises if the addressee of “cry for empathy” can be exchanged. Can the target of this cry be other than the original caretaker who – for some reason or another – failed to give all this to the former child who is now a patient? We will get back to this question, examining the conditions under which “the target-person is interchangeable”.

Fonagy and coworkers (Fonagy, Steele, and Steele, 1994) use the term *reflective self function* (RSF) to describe our ability to think about ourselves with the awareness of our attachment relationships. The more capable we are of RSF in difficult situations, the greater our chances are that we will cope with the difficulties. It is also RSF that gives a chance for the mother starting with a difficult childhood not to pass on her own “fate” to her child.

Fonagy and his group found that mothers with a difficult childhood (neglect, deprivation of love) could form secure attachment with their offspring (or rather the child with them) if their level of RSF was high. Similar mothers with low level of RSF could hardly succeed in this.

The final aim of psychotherapy is to increase the capacity for *reflective self function* (Holmes, 1996). Initially, it is the psychotherapist who “does this” for the patient, but the patient takes over this function continuously.

According to Fonagy and colleagues (Fonagy, Steele, and Steele, 1994),

“the child’s sense of psychological self is a direct function of the accuracy of the caregiver’s perceptions. The caregiver’s capacity to reflect the child’s psychological experience provides him with part of the mental equipment necessary to establish his own reflective self (...). This we believe is one of the critical psychological dimensions which closely link the mental functioning of consecutive generations” (p. 248).

If this reflective function is missing from early development, it poses great disadvantage to the developing infant: The child will be forced to use some primitive forms of defense mechanisms, and its attachment style will probably be anxious-avoidant, anxious-resistant, or – in an extreme case – disorganized.

There are many situations in which the child may miss the “shared understanding between the self and the other” (Fonagy, Steele, and Steele, 1994, p. 249). The reflective function of the caretaker may be missing if, for example, the parent – due to her depression – gives a continuous negative feedback to the child. The situation is even more critical, if the caretaker is openly hostile toward the infant. Since the infant’s own mental state depends on the perception of the caretaker’s mental state, these situations evidently endanger healthy development: The child can conform only to depression or hostility.

It must be noted that the example of positive coping with tense situations can also be passed on; in cases of transgenerational resiliency, descendant generations may follow the ways of positive coping and firmness of the members of the older generations (Varga, 2011b).

Subject and hypnotist “connected” in hypnosis can also be conceived as a practice field of RSF. This is exactly what Ray and Tucker’s (2003) conceptualization of hypnosis is about. They argue that similarly to childhood self-regulation – where parental effects are incorporated into the child – hypnosis can be conceived as some kind of openness to the suggestions of the hypnotist, which take the place of the regulatory mechanisms mediated

auditively and verbally by the parents, based on the common denominator of “internal speech”:

“hypnosis is achieved through a diversion of the normal self-regulatory algorithm of internal speech, facilitated in large part because this algorithm develops through internalization of what was initially an overt parental dialog” (p. 263).

The authors point out the possible evolutionary role of this possibility: Those who are capable of being open to the experience of hypnosis are more likely to benefit from the many favorable effects of hypnosis (from the relief of pain to the improvement of immune functions). They argue that there are two physiological components responsible for the hypnotic experience in the hypnotic context: increased theta activity (that has been associated with continuous concentration of attention, selective attention, and memory retrieval) and the activity of the anterior cingulum (that is responsible for the appropriate emotional-evaluative components).

Naturally, this effect is mutual. It is not unidirectional where it is only the hypnotist who has an effect on the subject. This is what Peebles has to say about the opposite direction and about the therapist’s mode of operation in a psychotherapeutic relationship:

„An intriguing, and potentially highly rewarding aspect, of doing depth relational work in psychotherapy [...] is that we as therapist are one instrument or medium through the patient expresses herself. The patient moves through us. Thus listening carefully means more than just tracking words attentively. It also involves attunement to one’s self and the resonances that begin bubbling up from within, be they physical sensations, images, meandering thoughts, emotions or attitude. Attunement is not hypervigilance. It is openness to what is there, without judgement or premature conclusions” (Peebles, 2008, p. 655).

The subject is “compelled” to think about himself/herself through the hypnotist; the context and material is given by the suggestions of the hypnotist. The difference is striking as compared to classical psychoanalysis, where the narrative of the patient is dominant; in the hypnotherapeutic relationship, it is usually the therapist who dominates verbatim. In psychoanalysis, the patient’s narrative “is the raw material of therapy and provides clues to the interactional matrix out of which it emerged” (Holmes, 1996, p. 54).

As opposed to this, in the typical situation of hypnosis, it is the hypnotist who outlines the world that is transformed into the *subjective reality* of the patient (subject). Modern hypnosis research keeps getting data that prove the reality of experiences put forth by suggestions (see Box 30).

The coincidence between external reality and the internal world is natural in infancy, when the imagination and reality of mother and infant are essentially the same, and both of them adapt to the other. Imaginative thinking becomes possible only later – with the development of language (Homes, 1996). Thus, the direction of development goes from (almost complete) unity through gradual separation – with the development of language and imagination –, to reaching the stages of “looking at each other” and then of independence. In this process, the hypnotherapeutic situation matches the early “unity” stage the best, although the technique provides a possibility of going through the entire line of development, the of supporting the increasingly differentiated and independent functioning of the subject/patient,

where the peak could be active-alert hypnosis or self-hypnosis. In the safe environment of the therapeutic relationship, the patient may become able to verbalize and ventilate the experiences he had in hypnosis, already with an appropriate emotional charge (catharsis and abreaction) (Baker and Nash, 2008).

It is put into words beautifully by Murray-Jobsis (1993):

“This good enough relationship is designed to allow positive bounding and self-awareness; facilitate acceptance of the symbiotic loss and of separateness; promote a working through and acceptance of unresolved feelings of despair, anger and anxiety; and promote growth into positive autonomy. The therapy attempts to redo the developmental process, rebuild relationships, and re-create some of the nurturing experiences as they ‘should have been’ in order to give patients the missing experiences that will allow them to once again continue to grow” (p. 427).

Baker (2000) thinks similarly:

“It has been suggested that hypnotic experience is itself a kind of transitional phenomenon, as consciousness progresses across varying arenas of focused awareness and internal absorption while maintaining a simultaneous connection to external reality and the presence of the therapist. It is the presence of the therapist that serves to direct, shape, hold, and give meaning to this transitional experience in the service of specified therapeutic goals. In this sense, the therapist in intensive hypnotherapy serves a kind of transitional function as he or she links feelings with words, body sensations with mental images, object experiences with their inner representations, and the present with the past” (p. 59).

This provision of corrective experience is sometimes rather concrete in the hypnotherapeutic practice with psychotics of Murray-Jobsis (1993). In the so called *renurturing* technique the patient in hypnosis may re-experience as his mother rocks him, looks at him, smiles at him, and holds him in her arms safely. In the method of *creative self-mothering*, positive parental care is provided to the child-self of the patient through the visualization of being simultaneously both a child and an adult, the therapist often representing the other parent. It is possible that in less specific situations, only the *pattern of experiences* brought about simply by the hypnotic situation may have the same effect (and perhaps may have a healing effect in itself in less severe disorders).

Treating trauma-related disorders, it must be kept in mind that even if the original trauma itself was not relational in nature (e.g., a natural disaster), the experience that the relationship is dangerous could be fixed and generalized; therefore, entering any new relationship may become an eliciting stimulus of this danger (Peebles, 2008). As Wolberg says, simply entering a relationship without strain is a progress in itself:

“The hypnotic relationship may act as a bridge that leads the patient from his isolation to a contact with another human being without the intense suffering that characterizes his habitual interpersonal relationship” (cited by Diamond, 1984a, pp. 5-6).

Note that the relationship offered by hypnosis has “only” the role of a bridge; it is not an aim in itself. Its role is to help move out from the misery of isolation and lead to other, new, and real relationships in which the person can already open up, based on the corrective relational experiences he had under hypnosis.

Nova Science Publishers, Inc.

BOX 30. THE NEUROPSYCHOLOGICAL CORRELATES OF HYPNOTIC SUGGESTIONS

Despite wide efforts, no brain correlates that could differentiate the “hypnotic state” from other states of consciousness have been identified yet (Woody and McConkey, 2003). Thus, the specific neurophysiology of “neutral” or “default” hypnosis cannot be grasped by our present methods (De Benedittis, 2012). As soon as we look for the background of *specific suggestions* (e.g., analgesia, hallucination, amnesia) in the brain, however, characteristic patterns are found in hypnosis (Killeen and Nash, 2003).

Several neuropsychological studies have demonstrated that the brain correlates of the changes arising as a result of hypnotic suggestions rhyme with the subjective experiences of the experimental subjects. Let’s see some of the findings briefly (for a longer summary, see Barabasz and Barabasz, 2008; Kihlstrom, 2003, 2012; Oakley, 2008, the April and July Special Editions of *The International Journal of Clinical and Experimental Hypnosis* in 2003).

- In the investigations of Barabasz, frequency analysis revealed that the amount of EEG theta activity in the “eye closure” condition correlates positively with hypnotizability. The locus of this activity is the anterior cingulate cortex (ACC).
- There is a concordant finding of several laboratories regarding the *pattern of event related potentials* (ERP): If the subject receives a hypnotic suggestion of hallucinating something that blocks a stimulus, the ERP will match the way the person experiences the alteration of the stimulus subjectively. These changes do not appear in relaxation, role playing, or suggestion without hypnosis.
- According to the findings of Crawford, if the PET responses of highly and lowly hypnotizable subjects are compared in hypnotic and non-hypnotic contexts in three conditions – (1) rest, (2) ischemic pain, (3) ischemic pain+hypnoanalgesia – the results will differ as a function of the hypnotic susceptibility of the subjects and the context. In the non-hypnotic context, the pattern of PET responses did not differ between low and high hypnotizable subjects; in the hypnotic context, however, they will be different: There are dramatic changes in the responses of the high susceptible subjects.
- Szechtman compared four conditions: (1) rest, (2) listening to a real audio record, (3) imagining the stimulus, (4) hypnotic hallucination of the stimulus. He found that changes of activation in the ACC that appear at the perception of the real stimulus can be seen only in the case of hypnotic hallucination. The extent of this activity is highly correlated with the *clarity* and *externality* of the hallucinated experience ($r=.95$ and $.84$, respectively).
- Kosslyn and his group compared visual imagery and hypnosis; they found that the area of the brain that is responsible for the “processing of color” (fusiform visual cortex) showed activity (in the left hemisphere) only in the hypnotic condition, when the task of the subject was to see color, regardless of the fact whether the stimulus was real colored stimulus or hallucinated color of an actually grey stimulus. The changes were in accordance with the subjective reports of the subjects.

- As a result of hypnotic induction, the changes appearing in the brain areas that are responsible for “getting into the state of hypnosis” – brain stem, thalamus, ACC – match the subjective experiences of the subjects, showing a relationship with the experiences of relaxation and absorption.
- Decreased attention and vigilance accompanying hypnotic relaxation cause decreased activity in those posterior parietal cortices that are thought to be related to attentional orientation and attention toward visual, auditory, and somatosensory stimuli.
- The P300 component of ERP attenuates upon the suggestion of decreased perception only as a result of hypnosis.
- Extensive studies have proven the amplitude changes in P300 as a result of hypnotic hallucination. The amplitude of P300 changed in accordance with the text of the suggestion, namely, that the stimulus disappears completely or only to some extent.
- The brain changes as a result of experimentally induced pain stimulus (heat) depended on the type of suggestion given to the subjects. When the increase of the *suffering* of the stimulation (affective component of the pain) was suggested, appropriate changes in the ACC were seen. When the modification of the *intensity* of the stimulus (sensory component of the pain) was suggested to the subjects, activity changes in the primary somatosensory cortex could be recorded (and no changes were seen in the activity of ACC in these cases).
- Appropriately formulated hypnotic suggestions are suited to modify the Stoop effect. When the suggestions said that the word would appear to be some nonsense “blah-blah” to the subject, not only did the reaction time data change, but there was decreased activity in the ACC – which can be interpreted as a sign of decreased conflict-monitoring, in harmony with the reaction-time data.
- The pleasant autobiographic memory recalled in hypnosis was more effective in decreasing experimentally induced pain than the “waking” recall of similar memories or than the relaxed control situation. Comparing these three conditions, the activity in the extrastriate cortex and the right ACC increased in the hypnotic situation.

In sum: The findings outlined above show that the experiences in reaction to the direct suggestions given after a hypnotic suggestion – mostly in the cases of highly susceptible persons – produce brain patterns that are comparable with the *real* occurrence of the given event or stimulus. The overall image implies that the “subjective (or virtual) reality” elicited by the suggestions is quite real if the brain correlates are considered.

Lynn and his group (Lynn and Rhue, 1988; Lynn, Weekes et al., 1991) found that one of the patterns behind high hypnotic susceptibility in adulthood is severe, abusive punishment in childhood. Thus, fortunately, people who had difficult relational experiences in childhood turn out to be highly susceptible to hypnosis; therefore, the possibilities of hypnosis can be achieved more easily and quickly in their cases.

Baker and Nash (2008) argue that “the flesh and bone of psychoanalytic therapy is the therapeutic relationship itself” (p. 447). The hypnotic relationship has different roles as a

function of the problem and treatment-type. In an *insight-oriented* situation, the appropriate “containment” helps the patient – through the positive aspects of working relationship and transference – to relax the defense mechanisms and to express and work through the conflictual material. In *intensive, long-term therapies*, the aim is to experience and tolerate the therapeutic relationship itself, and to identify the emotions arising in the relational experience. In some cases, the patient having elementary sensations or feelings may have the experience that the expression and sharing of these feelings can be tolerated, and can even be comforting in an appropriate interpersonal atmosphere (Baker and Nash, 2008). This may sometimes mean a re-construction from the foundations, where the patient experiences his identity as an integrated whole from the elements of bodily experiences “within the holding context of therapeutic alliance and the continuity of the therapist’s emphatic and observational presence” (Baker and Nash, 2008, p. 455).

20.1. WHAT SHOULD A HYPNOTIST BE ABLE TO DO?

At this point it is unavoidable to answer the question what kind of professional is suited to fill this function: Who can, standing on firm basis, open up in front of the experiences of the subject or client, and after filtering them through himself, and mirroring them back to the patient, provide a corrective relational experience and a possibility for re-organization.

It can be inferred from the clear warning of Bates (1993), according to which “Therapists using hypnosis (...) should not treat conditions with hypnosis that they would not treat without it” (p. 50), that the essence of adequacy is not to be looked for at the level of “hypnosis”, but through the analysis of some general professional knowledge and skill.

As Rhue, Lynn, and Kirsch (1993) call attention to it, it is very easy to learn to hypnotize. It is too easy to learn the techniques of hypnotic induction and the main rules of making suggestions. They also say – similarly to many other views – that “hypnotic talent is a characteristic of subjects, not hypnotists” (p. 14). Nevertheless, let us have a look at what is needed for the use of the tool of hypnosis. What is required of the hypnotist, the user of the tool?

The elements of “communicational competence” are easy to grasp. Parks (1994) considers eight elements of competence as important in the case of interpersonal control:

- Conversational skills (should communicate enjoyably);
- Calming ability (able to cheer up low-spirited people);
- Referential ability (communicating clearly);
- Conflict management skill (able to settle conflicts at the mutual satisfaction of those concerned);
- Convincing power (able to make the other believe what the other would not have accepted otherwise);
- Ego-supporting skill (elicit good feelings in the others about themselves);
- Narrative skill (can tell stories and jokes well);
- Regulatory skill (can convince someone offending the rules why his act was wrong)

It is striking that – as opposed to public belief – basically none of these elements are really important expectations of a hypnotist. Perhaps only the ego-supporting skill is mentioned with reference to the hypnotic relationship, too.

The analysis of providing effective social support with reference to the psychotherapeutic relationship circumscribes the essential elements that can be expected of people providing support. They are:

- *Empathy*: experiencing the feelings of the client, and communicating it appropriately;
- *Respect or nonpossessive warmth*: It expects the therapist to mediate acceptance, care, and positivity without evaluation toward the client;
- *Genuineness*: It requires being one's self, to talk authentically and non-defensively (Burlison, 1994).

These requirements can already be applied to the hypnotic relationship, too.

In critical situations, we can be even more sensitive to genuineness and authenticity, regardless of hypnosis. This is described quite vividly in Susanna Carolusson's (2011) account of how the members of the family were informed about the bicycle accident of her son:

“Just after five o'clock in the morning, the emergency room nurse came out and invited us to come up to the ward. The operation was over. I liked this nurse. She was kind, thoughtful and straightforward. No memorized phrases, no clichés. However, I did not like the neurosurgeon who updated us on Tobias' situation. She didn't say anything wrong, but she wrapped her words in a learned kindness. I felt like a mother who has just given birth, a lioness who will defend her helpless cubs at any cost but with no other weapon other than intuition. And my intuition knew that she was not genuinely present in the moment.

From that experience I learned even more than before, the importance of being genuine with people in acute crisis. Never act a learned role” (p. 365).

According to Bates (1993), the *very same* personal requirements apply to the hypnotic situation as in any other therapy: “flexibility, objectivity, accurate empathy, positive regard for patients, and effective communication skills” (p. 25). Strauss (1993) argues similarly, adding to the list “sensitive, little emotional pathology or character problem, respect for other people, capacity for communicating warmth” (p. 56). All this is reinforced by data from the opposite direction, namely, hypnotists with whom the subjects had unpleasant experiences were characterized by their subjects as “insensitive, unsure, anxious, and rigid” (Strauss, 1993, p. 66). Both Coe (1993) and Cheek (1975) point out the *optimism* of the hypnotist as a key to effective operation. Nash (2008b) lists strict requirements of hypnotherapists: “the therapist must marshal all of his/her clinical abilities: empathy, disciplined compassion, conceptual rigor, theoretical sophistication, and technical savvy, to use hypnosis maximally in service of the therapeutic goal” (p. 487).

There are data on the special possibilities of hypnosis, or putting it more freely: on the superiority of hypnosis over other modalities of psychotherapy:

Coe (1993) cites a summary which demonstrated on the basis of published case studies that psychoanalysis, behavior therapy, and hypnotherapy report 35%, 72%, and 93% success rates in an average of 600, 22, and 6 (!) sessions, respectively. Kirsch (1993), an advocate of

cognitive-behavioral treatment method, had to admit at the end of his paper that the analysis of the size-effect calculated on the basis of the efficacy of this method revealed that more than 80% of the average clients can expect better results if the cognitive-behavioral method is applied in a *hypnotherapeutic* environment than without it. Montgomery, Duhamel and Redd (2000) point out, based on the meta-analysis of laboratory and clinical pain studies that hypnotic intervention in pain management is efficient in 75% of the patients. Petterson and Jensen (2003) also stress the efficacy of hypnosis after the review of 17 controlled pain-studies.

There must be something characterizing both this method that can be so effective and the therapist using this method.

What are the *essential* expectations of hypnotists, and especially of hypnotherapists?

If the key to the therapeutic process is the working through and re-tuning of the internal working model of the patient, the therapist must evidently be “worthy of” the role of forming the social experiences of the patient, in addition to (and after) the patient’s real attachment figures. As Bowlby’s theory states, the attachment figure must be “**stronger and wiser**” than the person seeking attachment and security (Cassidy and Shaver, 1999).

Eisen (1993) also sets high requirements in this respect. He says Freud makes a clear parallel between love and hypnosis. As we seek our idealized selves in the partner in the former case, “the essence of hypnosis resides in an unconscious fixation of the subject’s libido to the hypnotists as an ego ideal” (Eisen, 1993, p. 123).

As Kline points out, it is an important question whether or not the hypnotist is willing or ready to enter the given relationship full of emotions.

“The mental set of the hypnotist, his willingness and the ability to enter into an intensified emotional relationship with the patient, are among the critical conditions for the induction and utilization of a hypnotic state” (cited by Diamond, 1984a, p. 6).

If the hypnotist is able and willing to enter this relationship, the next important requirements are to be able to provide security, primarily by his/her *presence* (physical proximity), but mainly by his/her *availability*, and by *demonstrating sensitivity* to the signals of the partner. The hypnotist must enable the client to explore (mainly) his own internal world with a safe background.

Searching for the criteria of a good (successful and efficient) hypnotherapist, Diamond (1984a) arrives at the following conclusion:

“The hypnotherapist must oftentimes feel and experience the patient’s unconscious affect and images within himself, courageously tolerating the pain and uncertainty while managing to remain strong, consistent and ‘good enough’ to provide sufficient comfort and direction for the patient to go on with the healing journey” (p. 9).

The therapist’s love teaches the client to love him/herself, and through this, others, too (Homes, 1996). “It is the physician’s love which cures the patient” (Ferenczi, 1952, p 19). Thus, the therapist’s readiness and *ability to love* and to *communicate this love* are necessary. The aim is to internalize this secure attachment-experience and to make it work even when the parties are not in close physical proximity of each other.

Fonagy and colleagues (Fonagy, Steele, and Steele, 1994) also call attention to the fact that there is a need for a proper *balance* between *attachment* and *intimacy*. Intimacy is based on the recognition that the other also has a mind, similarly to us. In order to experience

healthy intimacy with the other, a sufficient “degree” of attachment is necessary. Too tight and too distant (uncertain) attachments are equally disadvantageous (Holmes, 1996).

Actually, similarly to the original figure of attachment, the hypnotist has manifold roles: He must *regulate*, *interpret*, and occasionally *predict* the behavior, thoughts, and feelings of the other and himself. Thus, it is a real *interactional* role, “the working models are *ipso facto complementary*” (Brethelton and Munholland, 1999, p. 91).

The role of the hypnotherapist is also manifold in the sense that he must provide experiences aimed at “softening” the existing working models, to lead the patient through this period full of tension of (in this case) natural resistance, and to help the patient work through his working model(s) that proved to be obsolete already. All these roles must be played by the hypnotherapist alone; evidently, this complexity requires *flexibility*.

It is not easy to reorganize internal working models, especially if the very problem of the patient arises from the fact that the originally securely attached infant had to be disappointed by the availability or responsiveness of the attachment figure – regardless of the fact whether the disappointment was not the fault of the parent (e.g., she lost her job), or the parent can also be held responsible (e.g., in some illnesses or in suicide). It is not a small task to “convince” a disappointed person reorganize his/her working models.

Regarding working models, Bowlby’s theory hold that conscious and unconscious elements are mixed in tem. Often, the patient talks about his parents at the level of semantic memories with admiration, then, in sharp contrast, he also relates episodic memories of the parents’ actual behavior. The contradiction between the materials of the two memory systems is not revealed if they are separate, which is called *defensive exclusion* by Bowlby (Brethelton and Munholland, 1999). The consciously available information is “nice” and pleasant memories, while the unconscious remembers the difficult contents (or lets only some of it to the surface). Sometimes the child escapes painful contents by delegating only the person (i.e., the parent) to out of awareness, and acts out his anger on somebody else, instead of the real target; the “appropriate” target of the emerging feelings can thus be the patient himself, or even the therapist.

Although secure attachment it is not “the” “good” form of attachment to be followed generally, nevertheless, it has many advantages for health, psychological regulation, and in the formation of relationship networks.

Securely attached children are more inclined toward explorative play, can pay attention for a more prolonged period, show more positive emotions during free play, are more autonomous in problem solving, are more sociable also with strangers, communicate both with children and their parents more openly and efficiently, have to be disciplined less frequently, and enter play with their peers in more positive moods than the insecurely attached children (Feeney and Noller, 1996).

Holmes (1996) also argues that it is the aim of therapy to transform insecure attachment to secure attachment, identifying the roots of pathology in insecure attachment.

Research has revealed high levels of nurturing, understanding, and autonomy, and lower levels of aggression in the mothers of securely attached children than in mothers of children with insecure attachment. Maternal depression is linked to ambivalent attachment (Belsky, 1999). These regards outline the *personal characteristics* advantageous in the hypnotist for mediating the experience of security authentically.

As we have seen, hypnotic suggestions form the subjective reality of the subject or client. Let us make it clear: This is a *manipulative situation*, in the sense that there is intentional

intervention into the world of the other by hypnotic suggestions, with the aim of eliciting changes, transforming the representation the other has of himself/herself and of the social and physical world. This is manipulation, even if it is far from the popular belief of “manipulation” (in a certain sense, it is deeper than that); it does not mean that the hypnotist forces his will on the other. Nevertheless, it must be seen that some people cannot resist suggestions, even if they are explicitly instructed to do so (Katona and Bányai, 2008, 2009).

When analyzing “manipulation” we can exclude the case when the playing field of the other is narrowed and is restricted to a forced path – this is manipulation in the traditional, negative meaning. However, the situation in which we influence the other without the other’s awareness, but which does not restrict, rather it opens up and enriches the other’s possibilities, is “manipulation” in the positive sense. Naturally, all this requires exceptional *ethical sense and a purified system values*. Experts working with hypnosis must be aware of the deep responsibility involved with this role.

Hypnotherapy – similarly to many other forms of therapy – requires sufficient *creativity*. Literally, the interpretation of the person’s life history has to be *re-created*, which works well only on the foundations of a safe background (just as in many other creative processes), which evidently has to be provided by the hypnotist.

The process is made more difficult by the fact that this favorable attitude is not guaranteed by the patient, especially if he is insecurely attached on the basis of his original (real) life experiences, and he continues to behave in his “habitual” skeptical, hostile, and defensive manner, or is present with a cool distance. The situation is only seemingly easier with patients who are clinging on the therapist with their extreme dependence need. These are not yet real processes of transference, only the outcome of patient’s original relational patterns (that have to be corrected) in the situation of therapy (Slade, 1999).

The therapist “tolerates” all this because of his professional understanding, and continues to provide emotional availability and empathy. It is essential in the therapeutic process to provide a corrective opportunity for *expressing negative feelings* – which was not possible for the patient with his original caretakers. “A child is never daring to bite a hand that feeds, for fear of losing it altogether” (Holmes, 1996, p. 25).

In the protected medium of therapy, there is a possibility of expressing and acting out negative feelings, without the “world collapsing” in the meantime: The patient may trust the bearing capacity of the therapeutic relationship. Buck (1990) also emphasizes that “rapport” can be maintained despite the emergence of negative feelings, constant positivity is not necessary (as opposed to the assumption of Tickle-Degnen and Rosenthal’s [1990] model). Indeed, Kimura and Daibo (2006) found interactional synchrony in dyads discussing negative experiences, not only positive ones – in all indices of synchrony (simultaneous movements, tempo-similarity, coordination and smoothness of interaction). Instead of constant positivity, it is more important for the partners to express appropriate feelings conforming to situation and to the *feelings* of the other. If, for example, the other is in a difficult situation and talks about his unpleasant experiences, the appropriate emotional response is not positivity, but – for example – despair or worry.

In real life, too, the problem is not the emergence of difficulty, frustration or worry. They are natural. The question is how the environment reacts/reacted to the expression of the naturally arising negative feelings, and if it helped in finding a solution.

Thus, the therapist has tasks at several levels: He is empathic with the hostile, rejecting feelings of the patient while communicating security, understanding; analyzes and interprets

the process professionally; and reacts spontaneously to the relational methods originating in the given attachment style: is annoyed, perplexed, satiated, etc. (there is an excellent detailed analysis of these processes in Slade, 1999). Baker and Nash (2008) review techniques of psychoanalytically oriented hypnotherapy, the aim of which is to enable the patient visualize the therapist in his hypnotic imagination, while maintaining his relaxed state. This way the patient may get a feeling – through the symbolic representation of the therapist – what it feels like controlling a relationship with a real object. Thus, the therapist figure functions as a transitional object, but he himself does not consciously plan, direct, or control this process. Appropriate *dissociative capacity* is a definite advantage at the simultaneous operation of all this. Keep in mind that in the meantime, the therapist is also a human being with his own history, working models, attachment style, and relational schemata.

The *simultaneous* operation of *objectivity*, separation, and an emotionally charged, intensive, empathic working method are general requirements (Diamond, 1984a).

In light of the above, it is worth taking a closer look at the demands, required of hypnotists in the hypnotic situation. Strauss (1993) highlights the following elements in this question: Hypnotherapist are more active than professionals who do not work with hypnosis, can handle transference phenomena well, and can follow the fast dynamics of the hypnotherapeutic process. It is helpful in this if he can formulate suggestions well, if he can observe the subject's minute responses to these suggestions, is capable of intensive concentration, and if he can synthesize and utilize great amounts of information quickly.

According to Kohen and Olness (1993), successful therapists working with children should be competent and confident, should have personal experience in self-hypnosis and other forms of altered states of consciousness, should be sufficiently trained in hypnosis techniques used with children, should be knowledgeable in developmental psychology and in the differences in the patterns of development. It is also important to keep contact with other child-hypnotherapists, discussing their successes and failures, to review the records of his hypnosis sessions, and to keep track of the hypnosis literature of both research and clinical application.

Strauss (1993) also determined who should *not* use hypnosis. This method is not recommended for those who are afraid of failure, fear power, imagine that others are technically more prepared, are afraid of unexpected situations, and fear the disapproval of their colleagues. Naturally, all this can be formulated positively, too: Those who are confident in their abilities, are technically prepared, accept unexpected situations with curious interest, and like challenges, are excellent candidates for the administration of hypnosis.

Upon the warning of Rhue, Lynn, and Kirsch (1993), every professional working on the field of hypnosis is advised to think it over why they use hypnosis as a tool, what their *personal motives* are for choosing this method in general, in the given patient, and in the given session. It may also be important in this respect (too), to be aware of the limits of one's own competence. I hope the present analysis offered some clues for this.

All this – especially in a list like above – may seem to be too much to expect of a hypnotist. No wonder, it takes time until hypnotists – especially hypnotherapists – “find their own voices” (Bloom, 1993b). Perhaps Winnicott's liberating remark can be applied to hypnotherapists, too: One does not have to be perfect all the time; to provide the experience of security, presence, and responsiveness continuously – as required by Bowlby's theory; it is sufficient to be a *good enough* (hypno)therapist (too) (Holmes, 1996).

Nova Science Publishers, Inc.

SUMMARY

In the previous chapters, we showed the main results we found at the course of the phenomenological analysis of hypnotic interactions. Summarizing briefly these findings, we can say the following:

We have extended the concept of interactional synchrony to the phenomenological level. We argued that it is at least as informative to study the harmony between the participants of the dyadic interactions at the level of *experiences* as at the levels of behavior and electrophysiology (e.g., joint movements, posture mirroring at the level of overt behavior, coordinated breathing rhythm or parallel myographic activity at the physiological level. For more details see Bányai, 1985a, 1985b, 1991, 1998). We have collected and published a large amount of data about the experiences of the participants of the hypnotic interactions (Varga, Bányai, Gósi-Greguss, 1991, 1993, 1994, 1995, 1996, 1997, 1999, 2000; Varga, Józsa, Bányai, Gósi-Greguss, and Suhai-Hodász, 2004; Varga, Józsa, Bányai, and Gósi-Greguss, 2006, 2009a, 2009b, 2012; Varga, Bányai, Józsa, and Gósi-Greguss, 2008; Varga S. and Varga, 2009b).

We have developed methods for grasping phenomenological synchrony in an interactional framework; we have adapted and developed the *interactional* versions of the phenomenological methods that were originally developed for the subjects only: “Parallel Experiential Analysis Technique” – PEAT – (Varga, Bányai, and Gósi-Greguss, 1994), based on the EAT method by Sheehan and McConkey, 1982, and the interactional version of Nash and Spinler’s (1989) Archaic Involvement Measure (AIM) (see Bányai, Varga, and Gósi-Greguss, 2001; Bányai, 2008a, 2008b; Tauszik, Bányai, Gósi-Greguss, Varga, and Székely, 2006). We have applied the Phenomenology of Consciousness Inventory (PCI) developed by Pekala, Steinberg, and Kumar (1986) on a Hungarian sample of hypnotists, too, and developed a test for the direct evaluation of the interaction itself, namely, the Dyadic Interactional Harmony (DIH) (Varga, Józsa, Bányai, and Gósi-Greguss, 2006).

We have identified repeatedly occurring phenomenological contents in the experiential reports of hypnotists. The remarks, the transference contents, and the signs of

the alteration of consciousness were often occurring contents (Varga, Bányai, and Gósi-Greguss, 1993, 1995, 1999).

We have demonstrated that experiences can (also) be simulated, as long as the instructions for simulation also cover the period of reporting the experiences. At the same time, we have found many signs in the experiences of the hypnotists that indicated some kind of disturbance in hypnotizing simulators (Bognár, Varga, Bányai, and Gósi-Greguss, 2000, 2002).

We have compared the hypnosis situation with other, everyday and experimental situations along the experiences of the participants. We have demonstrated that hypnotic interactions are not outstanding from the aspect of evaluating the situation (Józsa, 2012b; Józsa, Varga, Bányai, and Gósi-Greguss, 2011).

We have found characteristic patterns in the cases of hypnotic interactions when the experiences of the two interactants were compared. The analysis of the phenomenological data of subjects and hypnotists revealed characteristic patterns. Interactional synchrony appears in a well documented way at the level of experiences in certain hypnotic interactions. Interactions can be characterized by the *degree* and the *nature of harmony* in the experiences of the participants. In some dyads, concordance/accord between the subjective reports of the hypnotist and subject is great; in other cases, the reports are independent of each other.

We have developed methods by which the degree of synchrony at the level of experiences can be grasped. In our research, we applied several methods in order to grasp the degree of harmony between the experiences of the interactants. Thus, the *degree of difference* between the evaluations of the partners, the *correlation* between these two values, and the *accord-patterns (clusters)* based on cluster analysis served for characterizing the degree of harmony of interaction at the level of experiences.

We have explored the relationship between the behavioral and the subjective indices of hypnosis. The behavioral side of hypnosis and the experiences regarding the interaction itself showed no consistent concordance, especially if the interaction itself was evaluated (Chapter 9 of this book).

We have analyzed the relationship between the degree of phenomenological synchrony and hypnotic susceptibility. No consistent (linear) correlation was found between hypnotic susceptibility as measured by behavioral indices and the indices of interactional synchrony (Varga, Józsa, Bányai, and Gósi-Greguss, 2009b, 2012).

We have studied the relationship between phenomenological patterns and the level of kinship. We found that – as opposed to behavioral scores – phenomenological indices are related to the level of kinship. Our most important finding was that the correlation between

the evaluations given by monozygotic twins about the hypnotic interaction was very high, although they participated in two different hypnosis sessions with two different hypnotist at the same time (Varga, Bányai, Gósi-Greguss, and Tauszik, n.d.).

We have studied the relationship between phenomenological patterns and hypnosis styles. We demonstrated characteristic relationships between phenomenological data and the construct of “hypnosis styles” (maternal and paternal hypnosis styles, see Bányai, 1991, 1998, 2002a). Both maternal and paternal styles enable the subjects experience an altered state of consciousness; however, the more maternal the hypnosis, the more it is characterized by an experience of harmony and intimacy and by (both positive and negative) emotional charge of the participants. In paternal style, the opposite was seen.

We have studied the level of oxytocin and cortisol in the hypnotic interaction. We found that the changes in oxytocin is not related to the hypnotic susceptibility of the subject, rather, it show a relationship with the relational experiences. After the hypnotic interaction, the level of oxytocin increases in the subject if the perceived harmony with the hypnotist is high, while it increases in the hypnotist if the subject has memories of less warm emotional relationship with his/her parents.

In the following, let us see a broader perspective, the critical analysis, and the summarizing discussion of our results with some special highlights.

21.1. PHENOMENOLOGY AND THE IMPORTANCE OF THE INTERACTIONAL APPROACH

The results shown in the previous chapters and the summarizing thoughts demonstrate convincingly the special possibilities investigations at the phenomenological level within the interactional framework offer. The importance and the possibilities of such studies are being demonstrated in an increasing number of points in the literature.

As we saw, according to the psychological model of social support, the essence lies in the *subjective sense* of the individual that he is receiving social support, or just *could* be receiving it if he wanted to or needed it. Some models even go as far as laying stress on sense of support, that is, the personal belief that there are people available to help in case of need. This can characterize the person at the level of personality trait, that is, the level of perceived support can be relatively stable (Burlison, Albrecht, and Sarason, 1994).

Thus, the central element of the effect is the subjective experience that could shift in any direction with respect to the availability of “real” (objective) support or help.

More specifically, the importance of the relational element is quite clear from the perspective of suggestive effects, too. According to Bernheim, the important elements of suggestion are (1) introduction of an idea into the brain, (2) acceptance of the idea, and (3) the realization of the idea (Tasso and Pérez, 2008). Of these elements, the middle one is the

closest to the interactional approach: In order to accept an idea, it should come from an appropriate source and an appropriate relationship should be assumed between the sender and the receiver of the “message”. Nevertheless, several other factors beyond the relationship play a role, too: for example, the type of suggestion, the abilities and expectations of the individual performing the suggestion, and so on.

It must be admitted at the same time, that despite the more than 100 years of empirical data collection, research has not found a uniform factor structure behind suggestibility (Tasso and Perez, 2008); the fact that repeated efforts and the application of increasingly refined testing and statistical methods could not reinforce either the common “g” factor model, or the multiple factor structure model indicate that susceptibility to suggestions is simply not an individual characteristic. Much is due to *situational* factors, and especially to *interpersonal* components within that.

Rainville and Price (2003) analyzed the neurobiological background of experiences related to hypnosis in detail. They revealed patterns and relationships of brain activity patterns accompanying relaxation, suspended control functions, and other experiences.

All this is to be greeted with joy, since they reinforce the justification of the phenomenological data – especially to those for whom subjective data do not seem to be credible or essential in themselves. Yet it would be worthwhile to subject the hypnotist to similar neurophysiological analysis, too; in fact, the *joint* analysis of the background brain mechanism of the hypnotized person and the hypnotist would be really interesting. Bányai (1985a, 1993c) shows a very nice example of this. She showed an experimental situation in which a kind of complementary working model of the EEG-activities of the hypnotized subject and the hypnotist appeared: In the stage of hypnosis where the subject’s brain pattern shifted from the usually right-hemispheric dominance to a left-hemispheric preponderance of activity, a less intensive, but nevertheless opposite shift was recorded in the hypnotist. The subjective experience of the subject was a key element in the interpretation of this finding, namely, the personal content and emotional charge emerging during the suggestion helped in understanding the brain activity pattern. This case-description is a nice example of the importance of the parallel analysis of neuropsychological data on the one hand, and of the special possibilities of interactional approach including the hypnotist in the neuropsychological recording on the other hand.

21.2. THE HYPNOTIST AS A HUMAN BEING

Experimental psychology recognized in the 1960s that the object of study, the experimental subject is not really an “object”, but a living being with feelings, expectations, and ideas! Several authors called attention to this in influential papers (see, e.g., Argyris, 1968; Carlson, 1971; Orne, 1962; Schultz, 1969; Sheehan, 1975).

In our research, the hypnotist is just as much a “subject” as the hypnotized person, for it is the interaction between them that is the phenomenon to be analyzed. Just as the living, human nature of the experimental subjects “had to be discovered”, it is time to realize that

experimenters is general, and hypnotists in particular, are especially important participants who have a forming role in the (hypnosis) experiments.

As early as in the 1980s, when Sheehan evaluated his research on “countering”, he concluded that although countering is an appropriate index of the degree of involvement of the subjects, it says “nothing about the behavioral consequences of the hypnotist’s involvement”, although it is recognized, that this aspect “may have a definite role to play in determining the quality of the phenomena that emerge” (Sheehan, 1980, p. 279).

Wachtel also concluded already in the 1970s that “the experimenter’s influence as a participating human other may be an untapped source of richer knowledge” (Wachtel, 1973, p. 327.)

In view of all this, the data secured from hypnotists in our research may gain special importance. This way we can give a more realistic image of the process of hypnotism (the act of hypnotizing) than the traditional image of the “magic” hypnotist. Many people (including professionals!) still expect the hypnotist to make the subject go into trance with a magic technique and superhuman abilities, who, on the other side, will melt as a wax figure in the hands of the hypnotist. A more realistic image of the involvement and working style of the hypnotists will relieve many of the exaggerated expectations, self-criticism, and even guilty feelings they have of themselves. The signs in the subjective reports that the hypnotist is (may be) also in a trance state – even in experimental hypnoses – are especially warning. Since professionals who do not work with hypnosis also report this (e.g., Rogers, 1979), it is worth considering the question of the state of consciousness of the therapist/experimenter is general.

On the basis of our results, we can point out some important considerations with respect to experimental hypnoses:

What should we do if the experimental hypnosis situation is “infected” with similar emotions, experiences, and alterations? Can we consider this hypnosis as standard, if it is standard at the level of words, but if it is so colorful with respect to the experiential background? Is it negligible that the feelings and thoughts of the hypnotist with similar charge cannot be controlled (and often they are never found out)?

Features seen in the subjective reports of the hypnotists – e.g., transference – are really side-effects of hypnosis, that have to be eliminated, or, perhaps, are natural, and even essential parts of hypnosis? On the basis of our results that experiences falling into the category of transference in *all* of our hypnotists’ free reports could be found upon the analysis of these reports, and that substantial involvement was found occasionally in the paper-and-pencil tests, we can hypothesize that this phenomenon is much more frequent and plays a more important role in clinical practice than previously thought. Whitehead et al. (2008) argue on the basis of the experiences of the hypnotists (especially in relation to the first

impression and the strong presence of stereotypes) that “the hypnotists simply proved themselves to be more human than otherwise assumed” (p. 415).

The alterations in the hypnotists’ involvement, state of consciousness, and transference reactions definitely play a role in the alterations of the efficacy of hypnosis. In addition to the experiential data, our behavioral, physiological and other data open the possibility for revealing these relationships.

21.3. THE QUESTION OF CONSCIOUSNESS

As it was mentioned in the introductory parts, the system of rules regulating interactional synchrony phenomena are not conscious, in fact, even involvement in the interactions is out of awareness (Heath, 1984). Our paper-and-pencil tests that asked for the experiences and feelings proved to be effective in securing data on the processes of interactional accord. A non-conscious phenomenon became available to depiction and further study.

The two main aspects of consciousness are the *monitoring* of ourselves and our environment (which is responsible for the representation of objects, events, and our own mental states at the level of phenomenal awareness appropriately) and the *control* of ourselves and our environment (whose aim is the volitional organization of the initiation and the termination of our thoughts and actions) (Kihlstrom, 2008). Yet at the same time, people are usually unaware of the subtle groups of mutual influences that control their interactions. They do “follow” the rules – e.g., if the partner begins to talk faster, they will also do so –, but this is not preceded by deliberate decision (Cappella, 1994; Waught, 2002). They do not have to “know” these rules at either the production or the interpretation side; these rules simply work. On these grounds, Tickle-Degnen and Rosenthal (1990) criticize one condition of “rapport”, namely, that coordination must be “conscious”. In Cappella’s interpretation, this is not a condition.

Why did Nature “hide” the rules of interpersonal interaction from consciousness? Why is it so difficult to become aware of them, or to teach them in certain justified cases e.g., to parents of premature babies, or to professionals treating these babies (Boukydis, 2012)?

One possible answer is that these interaction-regulating mechanisms begin to operate immediately after birth – or even before that – when no consciousness of the neonate can be counted upon which could control its behavior in the interaction.

As we have seen, these working models are partly conscious, and consist of partly conscious contents. Already Bowlby argued that the organization and transformation of our children’s working models can be facilitated by *talking* to them about the working models themselves (Brethelton and Munholland, 1999). Obviously, it is easier to do with respect to segments that can be reached by consciousness, but verbal dialogues may help in raising segregated contents into consciousness or in making them “meet”.

In our studies, “synchrony/harmony” did not have to be conscious in the involved parties; we do not even know if they were or not. We determined whether or not there was an accord between the judgments of the interactants only afterward, on the basis of the analysis and comparison of the subjective reports collected independently of each other.

It is striking how positively people experiencing this attunement or who become aware of – or who are confronted with – this concurrence react. This is well reflected in the subjective reports of experimental subjects in the research on visual imaginative synchrony by Csűrös (2011):

“It was an interesting feeling, and it was surprising that we draw the same things almost always. [...] it reinforced my somehow that I am with the right man.”

“It felt a little like ‘we are not alone in this world’.”

“It was good to be reassured that we gave each other to good hands.”

“It is a very good feeling, almost stimulating, when one becomes aware of the fact that I live in such a symbiosis with him/her. When I feel this, I do not feel alone at all (I know I am with someone who is the best to be with).” (Csürös, 2011, p. 67)

These reports were from couples: they had known and been dating each other for a long time, and they evidently knew that they belonged together. Still, it was an emphatic experience for them when they were confronted with a special interactional harmony between them within a research project.

The analysis and the description of the rules of social behavior provide us with tools that help us make the rules regulating our relationships more conscious than the natural situation, and to describe them more easily. This is a great responsibility, and this interventional possibility may/should be used only with a helpful, constructive aim (Cappella, 1994).

21.4. THE TEMPORAL CHARACTERISTICS OF INTERACTIONS

It is known that interpersonal expectations – let them be favorable or unfavorable – become communicated between the partners very fast (within thirty seconds), then they often manifest themselves as “self fulfilling prophecies” in the course of the interaction (Burgoon, 1994). On the basis of this, we would be inclined to think that everything is determined in the first half of the first minute...; notwithstanding, actual interpersonal relationships take place in *time*, they have a *history*. The temporal characteristics of the relationships also have to be taken into consideration when they are approached or analyzed. This is a real challenge in interactional research.

For example, the simplest categorization of concordance differentiates between *absolute* and *relative* types. In the former type, perfect temporal accord is necessary, while in the latter case, coordinated elements may appear with a temporal shift. Waugh (2002) points out that approaches that expect absolute coordination may miss some actually existing, but “only” relative synchronies.

Werner and Baxter (1994) differentiate several, both *linear* and *cyclic* temporal patterns that can characterize a relationship. Linear analysis takes temporal changes into consideration, while cyclic analysis considers recurrent cases, including spirally organized ones in which the relationship is at another level of development at the time of recurrence.

The temporal characteristics of relationships can be analyzed along the following criteria both in linear and in cyclic cases:

- *Amplitude*: How intensive is the event?
- *Salience*: Is the focus in the past, present, or future?
- *Scale*: What is the duration of the event?
- *Sequence*: Is there an order or system in the events?
- *Pace/Rhythm*: What is the rhythm or speed of the successive events?

Each of these characteristics can be interpreted in the case of hypnotic interactions, too. In fact – as you may remember – the original concept of synchrony grasped the concord or attunement of *temporal* patterns.

Tickle-Degnen and Rosenthal (1990) consider the three characteristics of rapport as important in different directions at the beginning and at the end of the interactions. Although *mutual attentiveness* must show a high level throughout, *positiveness* is important mainly at the beginning, while *concord* is an important characteristic of the later phase, when positiveness falls to the background. The temporal pattern of rapport is also emphasized by Altman (1990), who assumes temporality and development directly as intrinsic qualities of rapport.

Common sense and professional theoretical considerations thus both point in the direction that dyadic interactions have a “history”, and that they change and develop. We mentioned with respect to the function of synchronicity (Chapter 5) that it is relevant how the dyad treats the natural periods of the lack of synchrony and how they reach synchrony again. This learning period begins early in life. Fuchs and De Jaegher (2009) say the following about the reparation process between infant and caretaker:

“Reparation becomes a key process, as it conveys the experience that a miscommunication ends up in understanding and dyadic states again. The repeated experience of successful repair will have profound effects on the infant’s sense of agency, trust in others and bonding capacity” (p. 478).

It would be very important to grasp these changes in the degree of synchrony between the interactants. Yet it remains to be answered whether or not it is methodologically possible to analyze real dyadic interactions in a temporal sequence. Let us see some examples how researchers tried to meet this requirement.

Scheff (1997) showed many examples how a single interactional segment can be thoroughly analyzed. The complete recording and analysis of the verbal and other manifestations of the partners is extremely time-demanding, the simple description of a few minutes of interaction fills several pages, not to talk about analysis. He illustrated this approach with the analysis of a family breakfast.

McConkey and his colleagues (1999, 2001) developed a method by which the hypnotized person can report on his experiences *while being under* hypnosis, indicating the strength of experience on a “dial”, recorded by the computer every second on a 100-point scale. This way, the behavioral and experiential aspects of the individual test suggestions can be tracked continuously and compared with each other.

This method is really suited to track the experience in time (over and above, “online”), but it can follow only a *single* aspect of the experience, that is agreed on between the hypnotist (or experimenter) and the subject in advance.

Diamond (2000) makes a temporal analysis of a clinical situation, leading us through the experiences elicited by the given intervention in the therapist and the patient. We can track the original open verbalization and the reflections, thoughts, and memories of the members of the therapeutic dyad. This description is only fictional and purely speculative as yet.

Tracking the temporal pattern of interactions would be undeniably important. Yet it is a matter of consideration how, with what method to proceed with it. It is usually disadvantageous if the method of recording the experiences “disturbs” the original experience; in fact, often it is not worthwhile giving guidelines of analysis to the participants

in advance. Asking about the relationship itself could especially disturb the spontaneity of the persons involved.

Among the methods of phenomenological analysis, it is PEAT that could be suited to map the temporal characteristics of the interaction without disturbing the original hypnotic interaction, because the comments of the interactional partners can be organized along the timeline of the original video record. The paper-and-pencil tests provide a single, holistic, and retrospective characterization; therefore, they are not suited for fine temporal analysis. The method of visual imaginative synchrony (VIS), even working with several motifs, even throughout several sessions (continuously), tracing the patterns of its appearance, also offers a theoretical possibility for the analysis temporal patterns.

21.5. PATTERNS OR DIMENSIONALITY?

The patterns identified in the experiences of the interactants in our research rhyme well with the interactional patterns that have been found in *research*, in *clinical* situations, and even in *real* life interactions. Let's see them one after the other.

Several interaction researches found those two fundamental synchrony patterns that we also found. For example, in the area of vocalization and pause behavior, researchers have described *compensatory* and *matching* dyadic patterns. The same two patterns were found in the analysis of utterance-duration of individual therapists and their clients. The two basic forms of reciprocal influence (matching and leveling) could be seen in several aspects of vocal communication: speech rhythm, pauses, fundamental frequency, and amplitude (for more details, see Cappella, 1994).

According to Davis's (1983) model, empathy can be divided to two factors: (1) Taking the perspective of the other, which is the cognitive, intellectual level of attunement to the other, and (2) the visceral, affection reaction to the other. Chartrand and Bargh (1999) found that behavioral mimicry is related to the level of perspective-taking, but not to emotional attunement. A direct parallel can be drawn between the "paternal" and "maternal" hypnosis styles found in our studies and Davis' components of empathy. These styles also match the

results of Chartrand and Bargh (1999); while cognitive-intellectual (paternal) style is related to *behavioral* coordination (according to their studies), maternal style is correlated with *experiential* harmony (according to our results).

The analysis by Murray-Jobsis (1993) is an example of the validity of interaction patterns in *clinical situations*. The feelings coming to the surface under hypnosis – pain, bitterness, fear (e.g., the experience of the "unwanted child", that the client was not wanted by the mother) – find acceptance and can be expressed when the hypnotherapist *mirrors* them. Empathic mirroring helps the patient to raise these feeling to consciousness and to accept them. However, in stages where the patient's hostile, destructive feelings that could pose real danger to the patient or others are liberated; the therapist does not enhance the process by the patterns of mirroring, but helps the patient to control these feelings by other methods, for example, by reframing or replay. In the meantime, the therapist *counters* the patient's

momentary feelings from the position of calm serenity and professionally understanding distance.

Regarding metaphors, in the study of Angus and Rennie (1988) 11 client- and therapist-generated metaphors were identified in the audio records of the therapy sessions. These were judged as having meaning conjunction or meaning disjunction. In the former case the metaphors were interpreted the same way by the members of the dyad, while in the latter case the interpretations differed. Analysis found both collaborative/conjunctive and disjunctive styles.

In conjunctive cases, the therapist encouraged the client with attentive openness to interpret the metaphor freely, to elaborate on his feelings and subjective experiences in connection with the metaphor. The therapist applied the metaphor so as to support the client and promote his insight. This made the patient incorporate the therapist's suggestions more freely, enriching his frame of interpretation. The patients reported having been understood, and found the interpretations of the therapist as reinforcing and supplementing theirs.

The situation was the opposite in the disjunctive cases: The therapist followed his own path, not letting the patient do the same, and even disregarded the attempts of the patient signaling that he cannot show his own standpoint in explaining the metaphor. The patients experienced this as not being understood, while the therapist judged the patient as resistant. The more the patient tried to explain his standpoint, the worse the situation became: The therapist interpreted this as a sign of resistance and made the diagnosis that the patient was moving even further away from the real meaning of the metaphor.

This result – apart from rhyming with the patterns found in our studies – is also a good example of how DIH (or PCI) could be used in clinical situations. The comparison of DIH-patterns could be an “external” feedback to the therapist that his standpoint is moving away from that of the patient. As we saw in the above example, the behavioral signals of the patient are not necessarily perceived by the therapist.

These interactional patterns are often seen in *real life*, too. For example, in choosing a mate, the partners often “match” on the basis of their patterns of intimacy/attachment. For example, avoidant persons often choose anxious-ambivalent partners, and vice versa. Analysis of the attachment forms of couples show that if the “patterns” of the partners match (e.g., they satisfy each other's needs), the relationships are more durable (Feeney and Noller, 1996).

BOX 31. NOT ALL IS RELATIONSHIP

The individual level of hypnotic susceptibility shows astonishing stability; the distribution of hypnotizability measure in various cultures and times are surprisingly similar (Laurence, Beaulieu-Prévost, and du Chéné, 2008). There must be some basic feature that is determinative in hypnotic susceptibility, and that is independent of who the hypnotist is and what kind of relationship exists between the hypnotist and the hypnotized person.

It was known already in the “heroic age” of the application of suggestions that essentially, hypnosis is self-hypnosis, even in heterohypnoses. This is put forward the

most clearly by Coué's law of autosuggestion: [La suggestion n'agit qu'à la condition d'avoir été transformée en autosuggestion, c'est-à-dire acceptée au plus profond de soi. Les memes incidents produisent des effets différents suivant le sujet qui reçoit la suggestion]. "A suggestion only produces the condition to be transformed into autosuggestion, that is to say accepted by the deepest self. The same incidents produce different effects depending on the subject who receives the suggestion". (Coué, 1905 p. 50). In short: Every suggestion is self-suggestion, and the suggestions given by the external hypnotist must go through the filter of the recipient of the suggestion.

Killeen and Nash (2003) say that, essentially, the task of the hypnotist is to support the person hypnotizing himself. There are many methods that are not directly interpersonal that can do it: the computer, video or audio records, or even a printed page. Petterson, Jensen, et al. (2010) report about a method in the treatment of acute clinical pain whose essence is a virtual reality software with all its necessary device (hood, effects, etc.). In the virtual reality device, the patients could experience the three dimensional image of an icy canyon, accompanied by hypnotic suggestions. It is clear from the situation that the focus of the effect lies in the *evocation* of an altered state of consciousness and in *engaging* the patient's attention in it, rather than in the possibilities offered by interpersonal relationships.

Some theoretical approaches completely neglect the interpersonal aspect as an explanation of hypnosis. For example, Kirsch (1996), after the metaanalysis of the application of hypnosis in psychotherapy, arrived at the conclusion that "most of the advantage of hypnosis is due to the use of the 'hypnosis' label and is independent of any specific procedural components" (p. 110). To put it more bluntly: It is almost irrelevant what we do, as long as we call it hypnosis.

The above aspects all point in the direction that "not all is relationship". Although usually it is an important characteristic of hypnosis that it is about the intensive interaction between two persons, many people think that, in the end, it can be elicited by self-hypnosis and various technical devices. Furthermore, according to Kirsch's analysis, no procedural element could be identified apart from its name that would be a distinguishing trademark of "hypnosis".

The similarities of the patterns coming from research, clinical practice and real life support the validity of the concept of *phenomenological* synchrony outlined in the present work, because the same fundamental patterns were verified at this level – similarly to the verbal and behavioral levels.

It can be argued with respect to interactional harmony, however, that it may be better not to think in terms of types, but in *degree*, just as Waugh (2002) argued. He said the concept of interactional synchrony is more *dimensional* than dichotomous: It can appear in various degrees. It is advantageous if the presence or absence of harmony (or as Waugh said: interactional harmony and discord) can be handled within the same theoretical model and empirical approach.

In this dimensional framework with degrees it is also easier to study what kind of synchrony or harmony can be considered as optimal in a given situation. As we saw, most authors agree that a constantly high level of interactional synchrony is not desirable. The goodness of fit model of Hane, Feldstein, and Dernetz (2003) says that optimality is

determined by how well the *demands* of the partners fit their *possibilities*. Norcross (2010) lists several expressions for the degree of fitness between the two partners in psychotherapeutic situations: “responsiveness, customizing, attunement, tailoring, matchmaking, aptitude by treatment interaction” (p. 126).

The optimal level of coordination with the other is important, because this is what promotes the experience of finding identity with and distinction from the others the best, as Brewer’s (1991) model of optimal distinctiveness states. The methods applied in our studies – as opposed to most of the interactional studies that are identified as the analysis of the interaction between small children and their parents or the observation of behavioral data – enabled us to *ask directly* how the interactants rated the interaction itself, and to infer the above mentioned fitness. Signs of fitness and tension clearly appeared in indices of experience (PCI) and some subscales of DIH. The joint analysis of the two members of the dyad made it possible to infer possible mismatch on the basis of the sharp contrast between the judgments of the two persons.

We found only a small number of dyads in the hypnotic interactions whose experiences fit completely. It was more characteristic that we could see concordant patterns in *some* aspects, but independent or discordant patterns were present at other points.

It is an interesting question what a really corrective experience is in a hypnotic situation for a person who did not experience a sufficient degree of synchrony in his previous important relationships (let it be lack of synchrony or a constantly high level of coordination). Our empirical studies so far cannot answer this question.

21.6. THE QUESTION OF THE MODALITY OF THE HYPNOTIC INTERACTION: IMAGINATIVE-VERBAL-SYMBOLIC

The detailed observation of infants in interaction with the objects and persons in its environment made it clear that humans are “made for interaction”. The human infants who are only a few months old already attune to the people around exactly, they are able to communicate their own intentions and subjective states, and can read the intentions of others and detect their subjective states (see, e.g., the concept of “intersubjectivity” of Trevarthen and Aitken, 2001). These skills soon enable the infant to pay joint attention to an external object with another human being (cooperative or secondary intersubjectivity).

These quickly developing skills indicate that mutual attunement between two persons – between infant and its caretaker in this case – cannot be considered as a curiosity or an exceptional case. On the contrary, it is an integral part of development that they get into harmony in which they experience mutually similar (or identical) states, in which they learn about the emotional and motivated state of each other, and thus they react to the objects and events of the environment similarly (Gergely and Watson, 1996, 1999).

In the field of hypnosis, too, it is becoming documented both in the experimental and the clinical areas that there exists a dynamic, two-way, unconscious communication between

hypnotist and subject (Peebles-Kleiger, 2001). There are only sketchy ideas about its mechanism yet.

It may bring us closer to understanding this question if we set off from the similar mutual attunement observed in early mother-infant relationships. Gruzelier (2006) highlighted the role of the right hemispheric orbitofrontal cortex in this respect. This area is known as the center for social adaptation and emotional-motivational attunement. This area, that develops faster and is anatomically larger in the right hemisphere, plays a key role in the attachment process and in the organization of biological synchrony between mother and infant in the early years of life.

Adult attunement – in the course of therapy, for example – is not cognitive in nature, but emotionally charged; it is usually nonverbal, and – as Gruzelier put it – it takes place “spontaneously”. Again, the mediating role of the right hemisphere – the limbic system in particular – seems to be decisive in this.

We could see in the chapter discussing the possibilities of hypnosis providing corrective experiences that in Schore’s (1994) analysis it was the frontolimbic orbital cortex of the right hemisphere that is responsible for the cognitive-affective working models and for the schemata of emotional regulation. Several phenomena of hypnosis can also be linked to the dominance of the limbic system in the right hemisphere (Gruzelier, 2006).

What could be the “carrier” of this mutual attunement? What modalities and channels connect the partners?

Narrowing the attention of the subject in the course of hypnotic induction gradually leads the subject to relinquish control to the hypnotist; from this point on, the hypnotist more or less consciously begins to form the subjective reality of the subject. On the one hand, the hypnotist determines the world of experiences of the subject directly. On the other hand, the hypnotist follows what takes place in the subject with intensive attention, and from the position of profound attunement he facilitates the development of a common background of interpretation and meaning. An outstanding example of this process is Visual Imaginative Synchrony (VIS), where the match appears between the visual experiences of the two persons.

We have seen previously that hypnosis is special as compared to other forms of therapy: The verbal suggestions work on the – mostly – visual experiences of the subject, and we have also found that they can be in parallel with real experiences “The acceptance or translation of verbal content (hypnotic command) into experienced reality, an impressive dominance of concept over perception” (Jasiukaitis et al., 1997, p. 172).

If the patient – either in hypnosis or afterwards – describes his experiences *in words*, too, he must transfer them into a new modality, to the verbal world.

“In psychotherapy the patient uses *words* to describe an essentially visual record of an earlier experience” Convino, 1997, p. 111, emphasis added). In the course of this, the patient must follow the rules required by verbality, by grammar. The *ex*-pression itself has many advantages:

“One learns and becomes more fully, who one is within conversation with another. In the process of speaking – or signing, or picturing, whatever form of the process of symbolic communication – one hears aloud one’s thoughts outside oneself, and thus one

can hear in a different way, walk around the thoughts, view them from different angles, and absorb, comprehend and amend them. When speaking occurs, with/to another, who is truly listening and absorbing and reflecting what she is hearing, then what is inside us achieves even fuller dimensionality through crystallizing, in concrete, visible form, the actuality of thought itself. What was once unheard, unfelt thought now reaches visible, sensorially experienced impact and response from the other” (Peebles, 2008, pp. 663-664).

The relationship between verbality and visual modality also appears in a reverse direction. In the case of hypnosis, we can influence the generally visual experiences (images) of the subjects/patients by the (generally) verbal methods of suggestions. It is a key in bringing these modalities – i.e., visual or verbal – together that both of them are organized along a determined system of rules.

“There is an inherent connection between language, imagery, and movement in that they all require grammar and structure. These are all aspects of communication, which may be the essence of the hypnotic session” (Jasiukaitis et al., 1997, p. 172).

It is a key question how these inner processes (of imagination) find their way to reality.

Some of the cortical representations have a dual function: They serve both *perception* and *imagery*. Mental imagery is represented in the visual system. Furthermore, various characteristics, like color, shape, spatial arrangement are represented specially distinctly in both cases (Farah, 2000). Consequently, the imaginative attunement caught in the cases of *visual imaginative synchrony* (VIS, Varga S., 2008; Varga S. and Varga, 2009a, 2009b, 2011; see the Boxes 19 and 20 on VIS in Chapter 14) may give an experience identical with real perceptual experience.

Putting it more broadly: Imagery drawn by hypnotic suggestions (including all of its modalities) may provide an experience of *subjective reality* that is similar to objective reality. This is why it is important that the subject’s eyes are closed during (relaxational) hypnosis: This way, the perceptual traces of the external, objective reality do not conflict with the internal, subjective processes.

The possibilities offered by imagery are almost limitless. In order to correct a disturbed pattern of attachment, the patient can be lead through the whole line of development in imagination, from the experience of the infant snuggling in its mother’s arms, through watching its hands wandering in its visual field, and through the experiences of the distinction between me-and-the other to exploring the external world, and so on (Murray-Jobsis, 1993). Remember, in this working mode reality can be “bypassed” – I have given several examples of this – either by building in corrective experiences that do not match historical reality, or by preserving objective reality, but the outcome – e.g., of taking an imaginary medicine – depends on the events experienced in imagination.

It is also important to understand at the same time that vision is only one aspect of imaginative activity. Although it is possible to work with visual imagery with the majority of the people, the primary imaginative modality of some subjects is not vision. For example, Kohen and Olness (1993) described a case where the 14 year old girl could not work with visual images, but her kinesthetic imaginative activity was very vivid. Naturally, the therapist

worked out pleasant “images” in the kinesthetic modality to treat her migraine headaches and stress situations in school. Descriptions of body-sensations worked very well: the sand between her toes on the beach, the feeling of the warmth of the sun on her skin, etc.

21.7. TRANSGENERATIONAL PATTERNS, CORRECTIVE RELATIONAL EXPERIENCES

Norcross (2010) pointed out that at least 100 studies arrived at the uniform conclusion that clients in psychotherapy attribute the success of their treatment not to the technique or the method, but to their *relationship* with the therapist.

In our train of thoughts, we have often met the proposition that current hypnotic interactions are related to experiences connected with some previous – typically early childhood parent-child – relationships. I argued that interpersonal experience under hypnosis may have a corrective effect if the person did not have the opportunity to experience profound attunement in his or her real relationships.

There are many cases in the literature where old (original) relationship patterns are opened on the ground of the actual (hypnotic) relationship.

For example, Bartz et al. (Bartz, Zaki, et al., 2010) studied men, administering intranasal oxytocin or placebo control. The subjects had to recall their childhood experiences with their parents. According to the results, oxytocin revives those parental patterns that are preserved in the working model. After the administration of oxytocin, men whose attachment anxiety was low remembered their mothers are more nurturing, while men high in this anxiety recalled less nurture.

In the area of hypnosis research, Lynn et al. (1991) demonstrated that people high in hypnotic susceptibility are less sensitive to the **interpersonal atmosphere** of the experimental situation than the low hypnotizable persons. In the course of group hypnosis sessions, the hypnotist – in accordance with the previously arranged plan – behaved either coldly and impersonally or kindly, openly, and creating a warm atmosphere with high and low hypnotizable subjects. According to the results, this manipulation of atmosphere barely affected the highly susceptible people; both their behavioral and subjective responses were “unaffected” by this variable. The low hypnotizable persons, in contrast, performed much better in the pleasant interpersonal climate. However, the scores on the Archaic Involvement Measure, used to assess the relationship with the hypnotist, were not affected by the interpersonal atmosphere of the experimental hypnosis situation. This means that the hypnotic situation may set into motion interpersonal, archaic contents that are independent – in some sense – of the atmosphere of the actual interpersonal situation. People may bring “their own” relationship patterns to the surface and project it to the hypnotist.

Our results are concordant with these findings. We could see in our oxytocin data that the changes in the oxytocin level of the hypnotists were related to the emotions of the subject received from their parents (see Chapter 18). In the psychogenetic study, we found that the relationship patterns of the scores on the Archaic Involvement Measure (AIM) and the Dyadic Interactional Harmony (DIH) differed as a function of genetic background. While the

AIM was associated with the dopamine system, DIH – evaluating the current hypnotic interaction – was associated with the serotonin system (see Box 24, and Katonai and Veres-Székely, 2012).

In connection with this, it is worthwhile to recall the relationship between hypnosis style and interactional experiences (DIH): In the cases of maternal style hypnoses, there was no correlation between DIH scores and hypnosis style scores in the subjects, but the same correlations were high in the hypnotists. The more maternal the style of hypnosis, the higher the level of intimacy. Apparently, the hypnotist provides the possibility for subject to have a relationship experience by or along his or her own interactional experience-pattern.

In the twin study, we found that the experiences rating the hypnotic interaction (DIH) of monozygotic twins were correlated more *with each other* than with their actual interactional partners (the hypnotists). This harmony was *not* present in their behavioral (hypnotizability scores) or phenomenological (PCI) response-patterns.

These results can well be interpreted as the effects of early interactional patterns, while the hypnosis situation can be seen as providing the opportunity of activating (bringing to the surface) early relationship patterns – in accordance with the predictions of the social psychobiological model of hypnosis (Bányai, 1998, 2002b, 2002a).

As we saw in the introductory chapters, in Lundy's (2003) analysis, the so called “mind-related comments” are related to synchrony. According to the model, synchrony mediates both the security of attachment and the degree of “mind-related comments”. By the degree of “mind-related comments” the authors indicated how often the parents remarked in their interactions with their children that indicated that they considered the child as a being with a mind (e.g., Have you already figured it out?; Did get lost in your thoughts?; You like it, don't you?; etc.). In a broad interpretation, maternal (parental) sensitivity does not only mean that the parent (correctly) perceives and satisfies the physical and emotional needs of the child, but it also means that the parent looks at even the smallest infant as a being that has a mind, and does not only want to satisfy its needs. This was called “mind-mindedness” by Meins

(Lundy, 2003). “*Reflexive self function*” (RSF) described by Fonagy et al. (1994) implies a similar phenomenon, namely, the interpersonal embeddedness of taking care of ourselves.

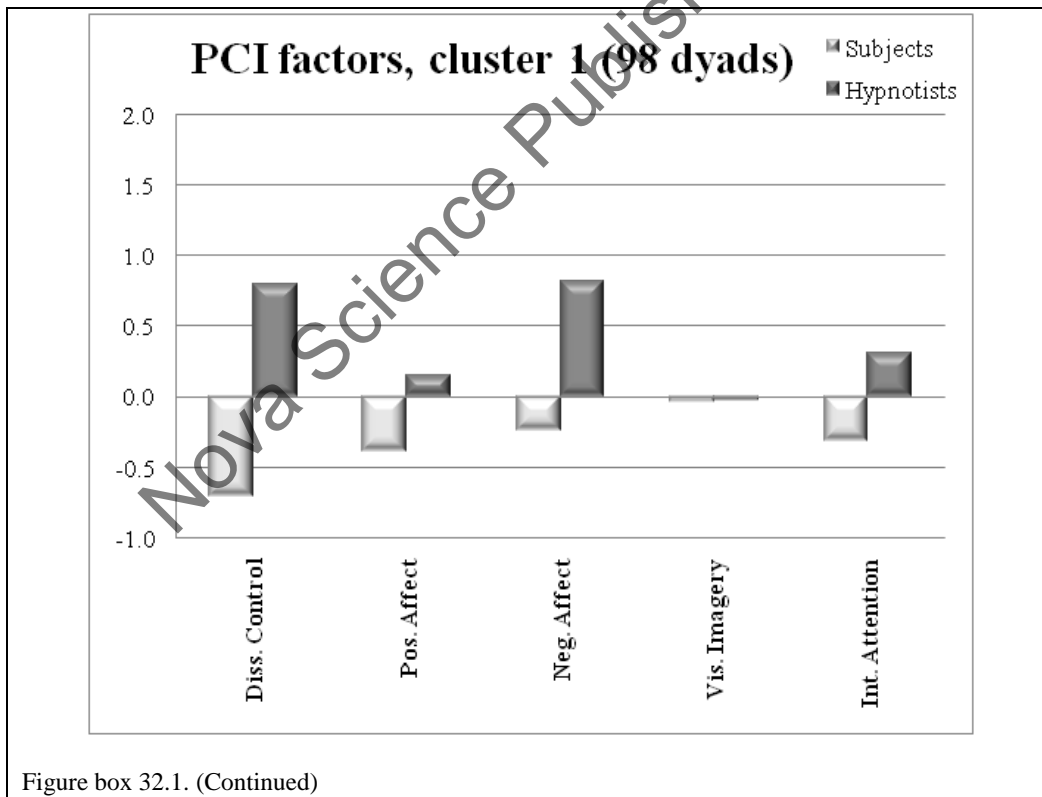
BOX 32. THE EXPERIENTIAL PROFILE OF SUBJECTS AND HYPNOTISTS IN THE FOUR CLUSTERS

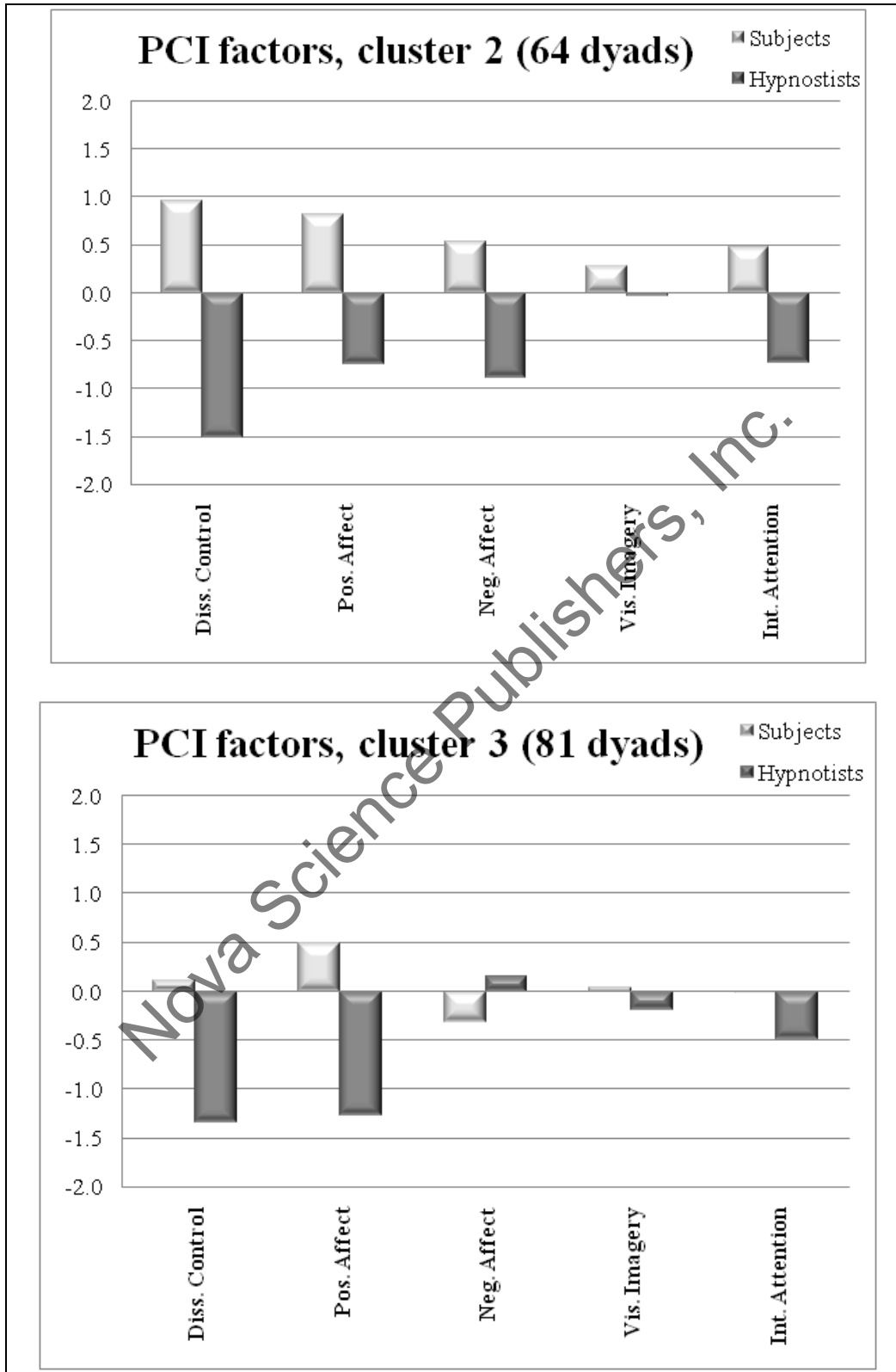
The Box 22 in Chapter 15 reviewed the system that was developed on the basis of cluster analysis, relying on the data of the differences between the scores on the DIH scales of subjects and hypnotists in almost 400 individual hypnosis sessions (Józsa, 2012b). Inspecting the values of the factor based PCI scales of subjects and hypnotists who belonged to one of 4 clusters arising in k-centered cluster analysis (see Figure box 32.1.), we can see that the hypnotists' values seem to differ from each other more than those of the subjects, especially in the Dissociated Control and the Positive Emotions dimensions. As opposed to this, the subjects, who belong to four clusters, tend to produce values that are close to the mean. It is also striking that the subjects and the hypnotists in

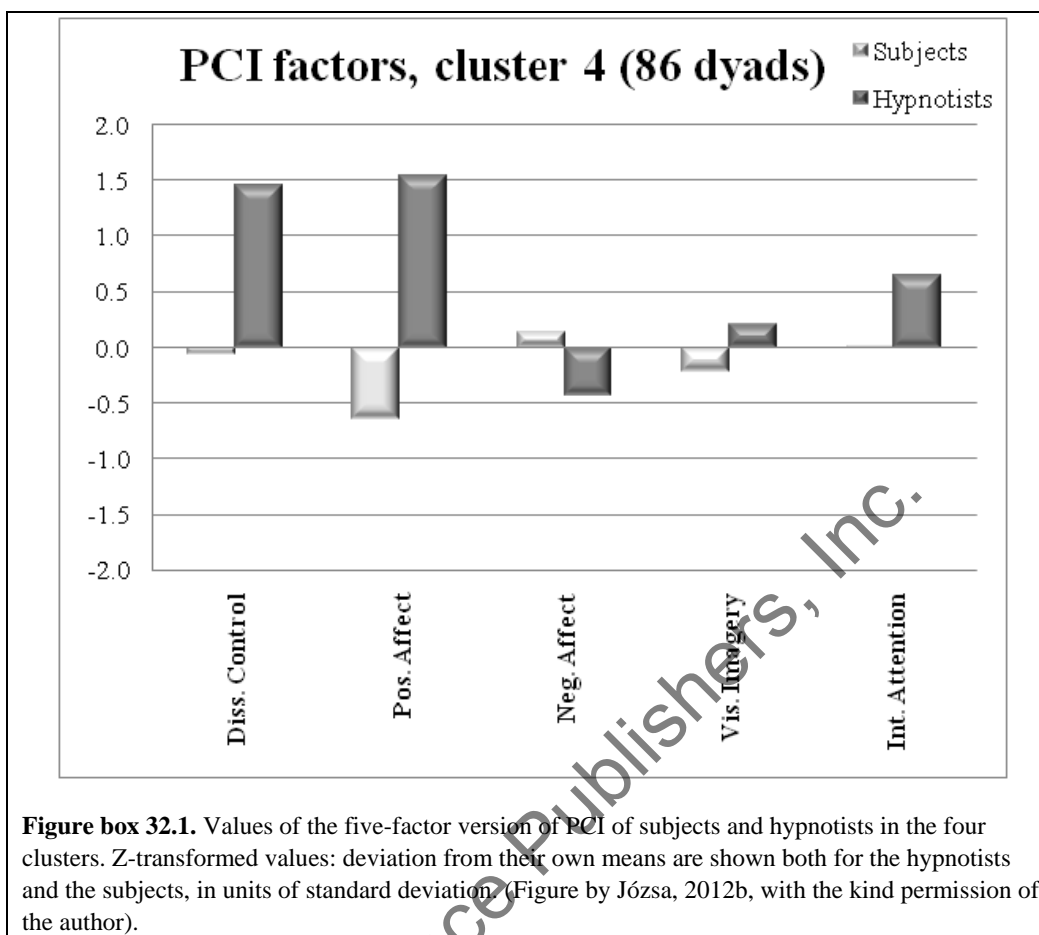
the different clusters tend to “alternate” in the positive and negative ranges, showing the four examples of compensatory working style.

Since hypnotists in the sample did get into each of the clusters, it implies that it changes flexibly what experiences the hypnotists have in the given interaction, and what relationship pattern “is offered” to the participants of the given interaction.

The therapeutic procedures affecting the oxytocin system can offer a possibility to restore the resistance to stress and the favorable operation of social relationship systems by compensating for the consequences of early losses (Nagasawa, Kikusui et al., 2009; Meinschmidt and Heim, 2007). As we have seen, hypnosis, representing both verbality and imaginative working mode, may be special a tool in the hands of the clinician in approaching and/or working through transgenerational memories or even fantasies (Varga, Józsa, et al., 2009a). The relational experiences within psychotherapy of appropriate atmosphere give a chance for the modification of the pattern of representation of important relationships (Ludwig-Körner, 1999). The patient may get a corrective experience in hypnosis, in this extremely enhanced emotional mutual attunement, when the hypnotist perceives, understands, and appropriately responds even to his/her unexpressed feelings (Bányai, 2002a; Bányai, 2008a; Varga, Józsa, et al., 2008).







For example, Feldman (2007a) and her group recorded the heart rates of 3 and 6 month of infants and those of their mothers simultaneously; they found that these rates attuned to each other gradually, in 3-second scales. The precondition for this was the sufficient amount of gaze synchrony.

.If mutual gaze was missing – typically in depressed mothers – the harmony between the heart rates could not be realized. According to Feldman's (2007b) studies, the careful adaptation of the mother to the social stimuli of the infant in mother-and-infant interactional synchrony situations regulates the heart rate of the child. It is hypothesized that this is experienced and internalized by the infant as the emotional experience of security, which remains with the person for the rest of his/her life.

It has been demonstrated that early neglect or abuse is accompanied by lower levels of oxytocin (Heim et al., 2008), and in cases of early neglect, decreased oxytocin responses are present to social support (Macdonald and Macdonald, 2010). There are many data on the decisive role of the quality of maternal care: Overprotective, emotionless, controlling maternal style is a risk factor in the depression, anti-social personality structure, anxiety disorder, drug-abuse, and compulsive and attentional disorders of the offspring (Champagne, 2008). Persons receiving neglectful maternal care are also more neglecting with their own

offspring, and if they had been victims of abuse, they are also more likely to expose their children to abuse. Ambivalent attachment style leads to unfavorable consequences in children (Barnett, Buckroyd, et al., 2005; Ward, Ramsay, et al., 2001).

The support of the oxytocin system by corrective experiences are significant because it has been proven with respect to the memory-effects of oxytocin that it facilitates the forgetting of adversity social experiences while activating the unconscious network of social memories (Macdonald and Macdonald, 2010). The ultimate aim is the balance between the ancient *defense* system activated as a result of threat and uncertainty and the more recent *attachment* system built on the experiences of proximity, trust, and care in a social context (Macdonald and Macdonald, 2010).

Thus, there are many signs showing that today's hypnosis can reach back to the relational patterns of decades ago. However, this process can be analyzed in a broader perspective, too. It can have a transgenerational effect how an individual experiences a relationship (Varga, 2009, 2011b). The way a parent reacts to child depends largely on how the parent was reacted to as a child. Growing up with a responsive, accepting parent increases the likelihood that we will also react sensitively and empathically to our own children (Brethelton and Munholland, 1999). In less favorable cases – when the parental pattern was neglecting and not enough sensitive – the provision of corrective experiences may set the affiliative processes to a better path not only for the given person, but to his/her offspring, too.

It was discussed earlier (Chapter 19) that the regenerative capacity of the mesolimbic dopaminergic system is maintained – fortunately – even in adulthood. According to our results, changes in oxytocin-level – which is related to the dopaminergic system – appeared in the hypnotist, who was in “caretaker” position, as a function of how the subject perceived his/her parents' emotional warmth.

As it was detailed in the introductory chapters, working models develop on the foundations of early relational patterns (Bowlby, 1980), and which may be modified upon appropriate social effects. In hypnosis experiments, subjects can also make use most of those open behavioral characteristics – e.g., smiling, touch, eye contact, words used, calling the subjects by their first name (for more details see, e.g., Bányai, 2002b) – along which our independent judges identified hypnosis styles. These may signal the subject what kind of relational pattern can be expected in the given hypnosis, which patterns would possibly be mobilized (or consciously recalled or visualized by way of fantasy) along which the subject can organize his/her interactional expectations. We hypothesize that the subject also communicates this to the hypnotist; therefore, a kind of “interactional bargaining” may develop. If the “supply and demand” sides get closer and closer to each other, we will probably find synchronous phenomena in the experiences of the participants, and a nice pattern of mutual attunement will develop. If bargaining remains one-sided and unsuccessful, the experiences of the interactants will probably go side by side, and we will see cases of disharmony or independence.

This exactly matches the dynamic, mutually embedded, circular, and mutually active process that is described by the concept of **enactive intersubjectivity** proposed by De Jaegher and Di Paolo (2008) and Fuchs and De Jaegher (2009). This conceptualization looks at social cognition as a mutual, active, dynamic process between the interacting partners (as

opposed to the representational conceptualizations which describe an individual who observes the other from the position of a “third person”, and who tries to understand, map, and represent the mental state of the other).

According to the model of enactive intersubjectivity, it is the very interaction that gives meaning to the situation that is mutually formed by both parties, in which both of them participate with their whole identities, and in which they have a continuous effect on each other. The rare moments when the developing meanings fit each other perfectly are the very moments of “subjective” interactional synchrony. These statements apply to the hypnotic interactions, too.

The phenomenon of “mutual incorporation”, however, is different in hypnosis than in everyday, face-to-face situations. De Jaegher’s group defines mutual incorporation as a process in which the two participants, seeing the lived body and face of each other, extend themselves in the direction of the other, which is the most obvious basis of social understanding (Fuchs and De Jaegher, 2009):

“As we can see, the concept of mutual incorporation leads to the opposite of the representationalist account: Interactional social understanding is not an inner modeling in a detached observer, but on the contrary, the other’s body reaches out to my own, and my own reaches out to the other” (p. 474).

As we have already discussed it in detail, in the situation of hypnosis, the subject usually participates with eyes closed, and although the hypnotist watches him/her, the hypnotist’s behavior is far from being as dynamic and spectacular as in everyday live interactions; in fact, it is mainly determined by the suggestions of the hypnotist. Rather, in hypnosis, it is the common *imagery fields* of the subject and the hypnotist (joined by the *verbal suggestions* of the hypnotist) that form the basis of mutual understanding. Visual Imaginative Synchrony may be the manifestation of concordance arising this way.

21.8. EVALUATION OF OUR APPROACH

Let us briefly review the strong and weak points of our approach and methods in comparison with the general trends of interactional synchrony research. Most of them also designate obvious considerations that would be worthwhile to be incorporated in similar future research.

It is a key issue in the study of experiences **when** the reports are given, and how directly it grasps the real (original) experience. In our investigations, all of the paper-and-pencil tests were retrospective in nature, although experiences may obviously be modified during the period of being together. The use of PEAT, the assessment of the experiences by the help of the video records is special in this respect, because this method may be able to demonstrate changes in synchrony along the timeline of the original interaction, if the parties make comments often enough.

On the other hand: Our approach asks for a report on the experiences and an evaluation of the interaction immediately after the termination of the interaction, not in general or with a

time-delay. With this more direct method we can expect more realistic and distortion-free data. The data are combined and generalized only at the level of data-processing (Tidwell, Reis, and Shaver, 1996).

At the evaluation of dyadic studies, it is also an important methodological issue how realistic, original, and life-like the interaction itself is (Tidwell, Reis, and Shaver, 1996). Although the cited studies were all built on laboratory hypnosis situations, we must see that they were all “real and original” in the sense that they were real encounters and they were not manipulated within this framework. No more “actual” non-clinical hypnosis situations could be designed than these.

Furthermore, we mentioned several studies that were based on data collected “in the field”, that is, that were based on the characterization of everyday interactions. Placing our research in this circle, we found that “laboratory experimental hypnosis” is within the range of other dyadic relationships studied in the laboratory (see Chapter 13).

Apart from a few illustrative examples, our data were built **exclusively on subjective experiences**. We also know, however, that subjective experiences are not necessarily accompanied by behavioral or physiological changes. There are individual differences, for example, in the speed with which subjective *experiences* are constructed, and in how this construction time is related to the *physiological* changes (in case of identical emotion-eliciting situations) (Gazzaniga, 2000).

It is a significant result that the concordance of the experiences of hypnotists and subjects was highly and professionally interpretably correlated with hypnosis styles, while hypnosis styles were rated by expert coders independently of the experiences. Nevertheless, I am convinced that the experiential level (and its synchrony) can be interesting “in its own right” (because this is what becomes more or less conscious), and we do not have to wait for other “objective” indices (of synchrony) to validate it – let it then be behavioral or physiological.

Most interpersonal (especially dyadic) interactions take place between **acquaintances** (Burgoon, 1994); in natural interactions, it is a crucial factor that the interactants know each other, and further instances of cooperation await them. As opposed to this, in most interaction investigations – as was the case in our experiments –, two, previously complete strangers enter a limited interaction whose frames and aims are determined by others.

Relationship viability is an important indicator of real, living relationships: It is the degree to which the individual or group can operate effectively, survive in the psychological and social sense, flourish, develop, change, and reach their short- and long-term goals.

As compared to natural relationships, hypnotic relationships (especially experimental ones) are short-lived. It is difficult to leave it without comment that although hypnosis can be a good model of interactions, it is too artificial and “too protected”: Its viability, for example, is never tested to such an extent as that of real interactions. Thus, it is problematic how generalizable the results coming from methodologically justified, but artificial situations are.

We have no **cross-cultural** data, although some investigations reported such data: For example, Lindsey (2008) and his colleagues found differences between Afro American and Euro American adolescent-mother dyads in the dyadic synchrony indices and their correlations.

Based on these studies, we barely know anything about the **background** of the synchrony of experiences. Skuban et al. (2006), for example, argued in their model describing parent-child interactions that they are determined by (1) the psychological state of the mother (depression, aggression, social support), (2) parental nurturance (responsiveness, acceptance), and (3) characteristics of the child (degree of frustration tolerance, verbal expressivity). We have no such data of our experimental subjects, although they also certainly differ generally in their level of depression, degree of verbal expressivity, or interactional sensitivity.

We also treated a basic aspect generously, namely the fact whether or not the interactional partners were of the **same or different gender**, although very interesting analyses could be done along this single variable.

Individual differences are also well known regarding how much people seek or avoid intimacy. Thus, “avoidant” people tend to avoid intimate situations (Tidwell, Reis, and Shaver, 1996). Therefore, our situations that are “objectively” or procedurally identical may not necessarily have the same meaning subjectively for the different experimental subjects. A certain level of proximity, self-disclosure, and other determinants of intimacy may be within the comfort zone of the subjects. It is reassuring at the same time, that Tidwell, Reis, and Shaver (1996), conducting their investigation in natural life situations, found that the experiences of anxious-ambivalent people in everyday social relationships are just as rich as those of the representatives of the other attachment categories.

Every empirical material presented here was secured in laboratory experiments with **healthy volunteers**. Therefore, we have to have our reservations before applying our conclusions to clinical situations. Frauman et al. (1993) cite four relevant instances along which clinical and experimental hypnosis situations differ from each other. In experimental hypnosis

1. the subjects are emotionally more stable;
2. the relationship between hypnotist and subject is more limited, and is more restricted by scientific objectivity;
3. the usual goal is to produce motor or perceptual phenomena (as opposed to clinical situations where eliciting emotional responses is more frequent);
4. hypnotic induction is more structured and emotionally more neutral than in clinical hypnoses.

“As the researcher creates a photograph, the clinician can produce a film” (Covino 1997, p. 113). Covino described one of the most important differences between experimental and clinical work exactly. Our data are really **snapshots**.

On the other hand, the methods applied in our investigations provided the basis for the interactional analysis of **clinically relevant concepts and phenomena**.

For example, *intimacy*, the leading factor of DIH is a key issue in clinical practice, too. IT could be an important moment of the therapeutic work that the patient learns to experience and control intimacy in the protected medium of hypnotherapy, experiencing that he/she does

not have to either give up himself/herself or lose the other at an appropriate level of intimacy (Eisen, 1993).

Our studies also showed that PCI seems to be an appropriate tool for mapping the experiences of hypnotic-like alterations of consciousness in *both* participants of the interaction. Notwithstanding, PCI does not ask directly about the relational experiences, even though its authors also interpret the hypnotic situation as an altered state of consciousness emerging within an interpersonal relationship (Pekala et al., 2010). This is why it is important to supplement the method of PCI by methods regarding relational elements (DIH, AIM), or to use a general instrument for assessing experiences that gives an influence-free chance for the appearance of experiences about the relational dimension (PEAT).

Furthermore, the analysis of the data assessed in parallel with each other also offers an opportunity for interactional approach even when the separately assessed test data are not international in themselves. For example, the comparison of the PCI-profiles of subjects and hypnotists enables us to describe concordant and discordant patterns.

It is also noteworthy that our paper-and-pencil methods (DIH, PCI) “performed well” in real life situations, too, from joint work through pleasure activities to sexual intercourse and parturition.

21.9. POSSIBLE DIRECTIONS OF EXTENDING THIS APPROACH

21.9.1. Incorporating Our Results and Methods into Trainings

It may be quite natural that in the course of therapy – as shown in our data, too – the hypnotist/therapist has unusual experiences, even **trance-like sensations**. It is important to realize that this is quite normal, and that it is probably a general concomitant of hypnotism (the act of hypnotizing) and of psychotherapy in the broader sense, but we do not talk about it. As if we had forgotten that shamans and many other traditional healers are definitely in trance while they are healing; Krippner (1993) compares this state to the trance states of highly hypnotizable persons.

Very rarely do we find reports (especially written reports) that show not only the presence of strange experiences, but also the astonishment and “lack of preparation” as the therapist receives them:

“I have not always known what to do with feeling numb in a therapy session. [...] I had previously been ashamed of and anxious about my reaction. I had thought something was wrong with me (wrong with my psyche, wrong with my empathy) – why else was I beginning to get fuzzy-brained and having difficulty feeling in the session? So I had tried the reaction from myself, not letting the awareness of it last long. When it popped up, I would try various ways to alert myself mentally (occasionally even surreptitiously trying to pinch myself!), almost as if I were trying to force myself into beta wave state. However, once it became clearer to me that it was a feeling, like any other, and as such could be tolerated and explored and considered as the potential expression of the affect reverberating back and forth within the space between me and the patient, then the

recognition of it as dissociation was immediate – because it was now mentally allowable to me for consideration” (Peebles, 2008, p. 655).

It is worthwhile to discuss these phenomena, for example, **in the training** of hypnotherapists, because they provide important pieces of information regarding the patient.

“The therapist’s physiology with or without the therapist’s awareness, may begin to much more the patient’s actual physiology rather than the patient’s stated control. For example, the therapist may begin to speed up automatically, tightening, and internally mirroring the patient’s pressure and urgency” (Peebles, 2008, p. 669).

It deserves special attention that at the moments of these experiences – when the basic phenomenon was already understood by and familiar to the therapist – the therapist mentally interpreted his subjectively appearing experiences by switching on the analytic part of his thinking (e.g., by recalling the psychological test-data of the patient) (Peebles, 2008). This pattern – parallel running of the emotional-imaginative attunement to the patient and the analytic mode of working – is an excellent clinical example of what we call “leveling” working mode in our research.

Several other dyadic interactions – e.g., doctor-patient, teacher-student, priest-believer – offer themselves to a similar approach. In any profession where there is emotionally toned involvement, uncovering real involvement, personal experiences, and attitudes toward the other seems to be important. This way, the efficacy of the participants of these professions could increase, we could obtain important cues as to the training of these professionals, and steps to prevent undesirable side effects can be formulated.

In addition to making students aware of the general appearance of the experiences emerging in the hypnotists (and helpers in the broader sense), and raising these experiences into consciousness, the **methods** applied in our research could also play an important role in the **training of the helping professions**. For example, Brunel and Martiny (2000), without making reference to EAT or PEAT, essentially use the method of video-playback to increase the empathy of counselors. The video record of the basic counseling interaction is played back independently to the members of the participating dyads who can comment them (this is the level of PEAT). After this, the video records of these sessions are watched together by the partners (this could be called “interactional EAT”), so they face those remarks that were made by their partner in reference to the original interaction, and can even compare if they match their own remarks.

The authors report that empathic skill improves after these sessions and harmony between the participants of the counseling situation increases.

21.9.2. The Extension of Our Approach to the Clinical Situation

According to our data, it is typical that the hypnotists’ experiences are characterized by the appearance of various altered states of consciousness even in experimental laboratory

situations with healthy subjects. This is even more so in situations of therapy, where attunement to the patient and the problem may make these experiences more intensive, especially in hypnosis.

In spite of what has been said so far, the literature rarely deals with the nature of the *interaction* with respect to the clinical application of hypnosis. In 2000, *The International Journal of Clinical and Experimental Hypnosis* devoted a whole thematic issue to review the evidence-based efficacy studies of the clinical application of hypnosis. When summarizing their experiences with this special issue, Lynn et al. (2000) said the following in their closing paper:

“We could locate no study among those reviewed that included measures pertinent to the therapeutic alliance with the hypnotist/therapist or that assessed mechanisms deemed

relevant by psychodynamic theory to treatment outcome, such as psychological defenses. This is unfortunate insofar as patients who improve in psychotherapy often show changes in the degree of positivity in their relationship interactions with the therapist (...) and in the maturity of their psychological defenses (...)” (p. 252).

In order to fill this gap, they have the following recommendation:

“In addition, future researchers should consider administering Nash and Spinler’s (1989) measure of archaic involvement. This measure assesses dimensions thought to be relevant to the affectively laden, interpersonal dimension of hypnosis” (p. 252).

This method is really suitable, but it would be difficult to compare the relationships with hypnotherapists and experts (therapists) of other methods. Beyond DIH being able to do this (because it is not specific to hypnosis), DIH is also suited for the comparison of hypnotherapy with other forms. It is worth recalling that in our results, Archaic Involvement Scale was more sensitive to the revival of early relational patterns, while DIH characterized the current (real) relationship. It must be noted that a similar approach would be desirable in the analysis of the efficacy of different forms of psychotherapy *in general*. As meta-analyses studying the therapeutic relationship point out, it would be extremely important to secure evidence-based data on the therapeutic relationship itself (Norcross and Wampold, 2011). DIH, for example, could be a quick tool, or a mirror, reflecting how the therapy sessions are evaluated by the client and the therapist. Norcross (2010) pointed out that the two participants “go side by side” all too often: The therapists think they are in harmony with the patients, although in reality, they are barely concordant.

In the literature, we can find convincing arguments about the extent to which hypnosis is a basically interactional phenomenon.

Barber (2008), for example, takes care and checks at the beginning of therapy if the patient will be able to tolerate the heightened interpersonal qualities accompanying hypnotherapy.

Diamond (2000) warned already at the turn of the millennium that times were changing in the conceptualization of therapy, too:

“Today, we are witnessing a veritable paradigm shift in the therapeutic realm by dint of the fact that the subjectivity of both patient and therapist – the *intersubjectivity* of the therapeutic dyad – is deemed essential for generating effective interventions” (p. 72, emphasis added).

Olness and Kohen (1996) also emphasized the importance of the relational element the therapeutic work in the cases of hypnotherapy with children:

“No matter how severe the problems of our child patients, we address ourselves to their striving for experience, for mastery, for social interaction, for the inner world of imagination, and for wellness. Thus we gain an ally in that part of the child that wants to experience life to the fullest, and this alliance forms the foundation of treatment” (p. 6).

Nova Science Publishers, Inc.

BOX 33. PERSONAL INVOLVEMENT OF THE THERAPIST

Argyle (1990) mentions love among adult dyadic relationships where meeting the needs of the other is more important than our own rewards. Love is about “the other”: We feel deep commitment toward the object of our love.

Evidently, therapeutic relationships – including hypnotherapeutic relationships – are like this, too. By pushing our own need to the background, we are able to provide the exceptional attention and care to the other, which makes this relationship different from every other everyday relationship. No wonder this “working mode” affects the hypnotist, too. A few colleagues have reported on this personal involvement in the literature, and some even disclosed the method by which they try to keep themselves in good condition.

One of the rarely seen “open” confessions about the internal struggles and hostile feelings a therapist has about the clients and their own work comes from the pen of Holmes (1996). Let’s quote a few important and sincere details from his confession:

“Patients who wheedle, manipulate, drink, when they should not, refuse to eat when they are starving, sleep in the day and stay awake all night, leave when we want them to stay, refuse to go when we have had enough of them” (p. 173).

“And always a sense of the pressure of time, never enough time, a job always half done, getting by, doing our best, wrestling with what seems insuperable problems with inadequate means” (p. 174).

“Families cancel, key people (often fathers) do not turn out, homework is not done, families feel stuck and we are often baffled by them, and even those with whom we think we are successful reveal that it was really the secret visits to the healer that made the difference!” (p. 175).

“This supportive work is hard; as with doing rounds, one is constantly aware of time, but the work can be rewarding, perhaps like playing simultaneous chess on twelve boards on once. Every minute of each encounter has to tell. One has to focus on the present moment, while remaining nonattached. The patient must feel that you are actually attuned to them with all your attention. What do you offer? Acceptance, continuity, stability. Paradoxically, given the briefness of the encounter, a sense of timelessness” (p. 177).

Murray-Jobsis (1993), working with psychotic patients, must experience – understandably – challenging involvement in her hypnotherapeutic work. She reports that she applies self-hypnosis for reviewing and sizing up the therapist’s own limits and barriers. This can help in differentiating her own, real feelings from the one evoked by the patient, leading to a better understanding. It is also important that this way the therapist can avoid satisfying his/her own needs with the patient.

„Therapists who have insight into themselves and their limits can also prevent themselves from becoming overwhelmed by the patients’ neediness or psychotic feelings and can thereby avoid abandonment of patients out of their own guilt, anger or desperation” (p. 433).

When talking about the hypnotherapy of patients suffering from posttraumatic stress disorder, Spiegel (1993) stresses that sometimes the patient – consciously or unconsciously – may identify the person causing the trauma with the therapist, and may

“splash” negative transference passion onto the therapist accordingly. In such cases, it is particularly important – emphasizes Spiegel – that the therapist understands the process and persevere in the original therapeutic working alliance.

Watkins (2000) mentioned only as a matter-of-factly (yet) that when treating soldiers suffering from war-neuroses with hypnotherapy, he, as a therapist also “lived through” the events in the course of abreaction. With reference to a case, where the patient had a shell concussion in the head after being in battle in the front line for a month, and developing complete amnesia as a result, he says: “An abreaction was then induced, during which he (and I) emotionally relived his battle experience up to the time of the shell explosion” (p. 328).

Watkins treated hundreds of soldiers who survived indescribable events in the battle field. “The battle scenes of trauma and horror that these soldiers had experienced were almost indescribable (and barely comprehensible by those mental health professionals who had not personally experienced combat)” (p. 325).

Furthermore, the formula quickly developed: The traumatizing events in the battle field “sat on” some earlier – usually childhood – trauma as a predisposing factor; thus, treatment was not only the abreaction of the events in the battle field, but the uncovering and elaboration of the original trauma. Hundreds of them...

Watkins’ own method of keeping himself in good condition was swimming after work: “At the end of each working day, I would swim around the long pier at Daytona Beach, which extended approximately a quarter of a mile out into the ocean” (p. 332).

Still: *Really* interactional approach rarely appears in research, in fact, even the clinical studies usually neglect references to the therapeutic relationship. It is incomprehensible that the otherwise excellent clinical summaries in the compilation of Nash and Barnier (2008) also stick with the description of the technical elements and steps; one has to “hunt” for remarks and thoughts that reflect that it is an interpersonal method. For example, when reviewing the hypnotic approach to the treatment of depression, Yapko (2008) mentions the development of a “positive therapeutic alliance” as the first element in the plan for therapy in one – and only in one! – of the case studies.

As if experts of hypnosis themselves made the mistake Barabasz and Barabasz (2006) warned us about:

“The amateur tends to think of hypnosis as simply a state entered into by the participant in response to certain cues provided by the hypnotist. Such a beginner often shows the greatest interest in reading and memorizing techniques while completely ignoring that it is the *meaning* of the interpersonal interaction implied in an induction and not the simple stimulus value of certain words that is of most significance in determining the kind and extent of the hypnotic response” (Barabasz and Barabasz, 2006, p. 108, original emphasis).

Scott, Lagges and LaClave (2008) note in the introduction of their paper when talking about the application of hypnosis in the treatment of children:

“It is through suggestion, not coercion, that we ask patients to think about, see, feel, and experience their world in a different way. When it works well, it can be one of the

summit experiences in the patient's (and the therapist's) life – similar to the first glimpse over the edge of Grand Canyon, looking out over the expanse of the ocean for the first time, or witnessing the birth of a child” (p. 593).

In this beautiful description, the patient and the therapist are separated by brackets, yet obviously, they walked to the Grand Canyon together, or to the ocean, and sometimes they witness the birth of a child together – symbolically, of course.

It is a refreshing exception when the relational element really appears in the clinical application of hypnosis. For example, Scott, Lagges, and LaClave (2008) discuss in their paper how they built in the relational dimension between the therapist and the child into the metaphor they used as a backbone of therapy. The hypnotherapy of the child suffering from Crohn's disease was built on the metaphor of car race, in which – naturally – the child was the racing driver, or sometime he sat next to a celebrated star driver. The relationship with the therapist was manifested as the connection between the driver and the crew in the pit stop.

As a closing thought, let me quote a paragraph from the study by Baker (2000):

“These curative aspects of hypnosis work occur between the patient and therapist, not inside of the patient alone. These mutative experiences are the result of an interactive process that is formed by both patient and therapist as they influence one another reciprocally and jointly contribute to the evolving experiences of how they engage, relate, and construe the meaning of their relatedness. This interaction effect may well be the central mechanism for the therapeutic action of hypnosis. It is not what the hypnotist does which is critical. It is how the *dyad* construes and experiences how they are *together* that seems most evocative and evolutionary” (p. 65, emphasis added).

Our journey to the world of experiences of the hypnotic interaction wished to offer a glance into this very process. The methods and directions of analysis shown proved to be fruitful within the experimental context. The next step may be their extension into the clinical field.

We are far from fully understanding the hypnotic interaction, but the interactional approach to hypnosis and the detailed analysis of phenomenological data of both participants seem to be a promising way to discover the real essence of hypnosis.

APPENDICES

Nova Science Publishers, Inc.

APPENDIX I

Hypnotic susceptibility scales used in our studies

| Name and reference | Test suggestions | Score range |
|--|---|-------------|
| HGSHS:A Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor and Orne, 1962) | <ol style="list-style-type: none"> 1. Head forward 2. Eye closure 3. Hand lowering 4. Arm immobilization 5. Finger lock 6. Arm rigidity 7. Hands moving 8. Communication inhibition 9. Hallucination 10. Eye catalepsy 11. Post-hypnotic suggestion 12. Post-hypnotic amnesia | 0-12 |
| WSGC Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (Bowers, 1998) | <ol style="list-style-type: none"> 1. Hand lowering 2. Moving hands together 3. Mosquito hallucination 4. Taste hallucination 5. Arm rigidity 6. Dream 7. Arm immobilization 8. Age regression 9. Music hallucination 10. Negative visual hallucination 11. Posthypnotic drawing 12. Posthypnotic amnesia | 0-12 |
| SHSS:A, B Stanford Hypnotic Susceptibility Scale, Form A or B (Weitzenhoffer and Hilgard, 1959) | <ol style="list-style-type: none"> 1. Postural sway 2. Eye closure 3. Hand lowering 4. Arm immobilization 5. Finger lock 6. Arm rigidity 7. Hands moving 8. Verbal inhibition 9. Hallucination 10. Eye catalepsy 11. Post-hypnotic suggestion 12. Post-hypnotic amnesia | 0-12 |
| SHSS:C , Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer and Hilgard, 1962) | <ol style="list-style-type: none"> 0. Eye closure (not scored) 1. Hand lowering 2. Moving hands 3. Mosquito hallucination 4. Taste hallucination 5. Arm rigidity 6. Dream (about hypnosis) 7. Age regression (school) 8. Arm immobilization 9. Anosmia to ammonia 10. Hallucinated voice 11. Negative visual hallucination (three boxes) 12. Post-hypnotic amnesia | 0-12 |

APPENDIX II

Some details of the studies discussed

| Code of the experiment | Procedure, hypnosis scale(s) | Subjects n.r.=not recorded | | | | Hypnotists | Phenomenological methods | Reference |
|------------------------|--|--------------------------------------|-------------------|--------------------|---------------------------------------|--|--|--|
| | | n | male:female ratio | mean age (SD) | high/medium/low hypnotic susceptibles | | | |
| MIA | SHSS:B, HGSHS:A modified for individual and tape administration | n=30 | 15:15 | 21,13 (2.23) years | 14/10/6 | 1 male hypnotist | Free written reports | Varga, 1991 |
| CSOPH | HGSHS | n=109 | 29:80 | 27.79 (7.72) years | | 1 female hypnotist | Free written reports | Varga, 1991 |
| HYPNOTIST | TRH (5 hypnotists) or AAH (2 hypnotists) | n=103 experimental hypnosis sessions | | | | 7 hypnotists (4 females, 3 males) | Free reports (PEAT, written or audiotaped) | Varga, Bányai, and Gósi-Greguss (1999) |
| EAT 1st series | waking control and hypnosis (from SHSS:B) in a counterbalanced order | n=12 | 5:7 | n.r. | 4/4/4 | 1 female, 42 years old | PEAT | Varga, Bányai and Gósi-Greguss (1994) |
| EAT 2nd series | SHSS:A | n=12 | 6:6 | n.r. | 4/4/4 | 1 male, 33 years old | PEAT | Varga, Bányai, and Gósi-Greguss (1994) |
| PCI:SHSS:C | Participants were hypnotized twice, first with HGSHS:A, then later with SHSS:C | n=104 | 52:52 | n.r. | n.r. | 5 different female experimenter hypnotists | PCI after SHSS:C | Varga, Józsa, Bányai, Gósi-Greguss, and Kumar (2001) |

APPENDIX II (Continued)

| Code of the experiment | Procedure, hypnosis scale(s) | Subjects n.r.=not recorded | | | | Hypnotists | Phenomenological methods | Reference |
|---|---|--|-------------------|---------------------|---------------------------------------|---|---|---|
| | | n | male:female ratio | mean age (SD) | high/medium/low hypnotic susceptibles | | | |
| SHSS:A | E1: SHSS:A | n=232 | 64:168 | n.r. | | 18 hypnotists (male and female hypnotists in 25% and 75% of the sessions, respectively) | PCI, DIH | Varga, Józsa, Bányai, and Gósi-Greguss (2006) |
| WSGC | E2: WSGC | n=110 | 31:79 | n.r. | | 3 female hypnotists | PCI, DIH | Varga, Józsa, Bányai, Gósi-Greguss (2006) |
| “SZIA” group screening (1 st round) | Screened by HGSHS | n=229 | n.r. | n.r. | | | Tellegen Absorption Scale | |
| “SZIA” individual screening (2 nd round) | Screened by SHSS:C | n=47 | 24:23 | 23.13 (4.5) years | | 2 female hypnotists | Field, DIH, AIM | |
| “SZIA” main part (3 rd round) | Free induction, free analgesia suggestion, tested by a standardized cold pressor test. Standardized age regression and trance-logic suggestions, free dehypnosis. | n=32 | 16:16 | 22.4 (4.11) years | 8/8/8, plus 8 simulators | 4 hypnotists (2 females, 2 males) | Field, DIH, AIM, PCI, PEAT (judgement of hypnosis styles) | Varga, Bányai, Józsa, and Gósi-Greguss (2008) |
| “IKER” | Individual hypnosis sessions SHSS:A | 62 MZ, 60 DZ, 62 siblings, and 94 parent child pairs, altogether n=278 | 88:190 | 35.11 (14.87) years | | 17 hypnotists (14 females, 3 males) | PCI, DIH | Varga, Bányai, Gósi-Greguss, and Tauszik (n.d.) |

| Code of the experiment | Procedure, hypnosis scale(s) | Subjects n.r.=not recorded | | | | Hypnotists | Phenomenological methods | Reference |
|------------------------|--|-------------------------------|-------------------|--------------------|---------------------------------------|----------------------------------|--------------------------|-----------------------------|
| | | n | male:female ratio | mean age (SD) | high/medium/low hypnotic susceptibles | | | |
| | | | | | | | | |
| | | | | | | | | |
| “HANGOL-6” | Screened by WSGC, then SHSS:C (Main phase: details see appendix II. B) | n=40 | 20:20 | 24.74 (4.93) years | | 4 hypnotists (3 females, 1 male) | AIM, PCI, DIH | |
| “Psychogenetika” | WSGC | n=136 | 36:100 | 23.39 (4.17) years | | 3 female hypnotists | AIM, PCI, DIH | Székely et al., 2010; |
| EDI | SHSS:C | n=24 | 24:0 | n.r. | | 4 males | AIM, PCI, DIH | Varga and Kekecs, submitted |

AAH: active alert hypnosis

AIM: Archaic Involvement Measure, (Nash and Spinler, 1989)

DIH: Dyadic Interactional Harmony Questionnaire (Varga, Józsa, Bánya, and Gósi-Greguss, 2006)

DZ: dizygotic twin

H: Hypnotist

HGSHS: Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor and Orne, 1962)

MZ: monozygotic twin

n.r.: not registered

PEAT: Parallel Experiential Analysis Technique.

PCI: Phenomenology Consciousness Inventory (Pekala, 1982, 1991)

S(s): Subject(s)

SHSS: A or B: Stanford Hypnotic Susceptibility Scale, Form A or B (Weitzenhoffer and Hilgard, 1959)

SHSS: C: Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer and Hilgard, 1962)

TRH: traditional relaxational hypnosis

WSGC: Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (Bowers, 1998)

APPENDIX II/B

Overview of the experimental design of Hangol-6 research (source: Gösi-Greguss, et. al. 2008)

| Duration (approx.) | "HYPNOTIST CONDITION | EXPERIMENTER CONDITION | HYPNOTIST CONDITION | EXPERIMENTER CONDITION |
|--------------------|---|---|---|---|
| | WAKING | | HYPNOSIS | |
| | <i>Before first session:</i> Filling out and signing informed consent form and Vividness of Visual Imagery Questionnaire (VVIQ) | | | |
| 1' | Subject waits for the hypnotist alone in the experimental room | | | |
| 5' | Taking history, rapport formation | | | |
| 15' | Listening to a musical assembly (with "hypnotist") | | <i>SHSS:C induction</i> (with hypnotist) | |
| 35'-40' | <i>Waking tasks</i> (Laterality Test, rating emotions of sentences, rating emotions in faces, implicit learning task, Reading from the Eyes Test, Stroop test, Fake Smile test, rating emotions of musical excerpts) (with "hypnotist") | | <i>SHSS:C test suggestions</i> (hand lowering, moving hands apart, mosquito hallucination, taste hallucination, arm rigidity, dream, age regression, arm immobilization, anosmia, hallucinated voice, negative visual hallucination) (with hypnotist) | |
| 30" | | "Hypnotist" gives rapport over to experimenter and leaves the room. Experimenter enters | | Hypnotist gives rapport over to experimenter and leaves the room. Experimenter enters |
| 2' | <i>GSS 2:</i> reading text ("hypnotist") | <i>GSS 2:</i> reading text (experimenter) | <i>GSS 1:</i> reading text (hypnotist) | <i>GSS 1:</i> reading text (experimenter) |
| 2' | <i>Gudjonsson Suggestibility Scale (GSS) free recall</i> | | | |
| 23' | Tasks (<i>delay period before testing GSS</i>) (frames-task; Visual Imagery Synchrony task (VIS), Ekman's recognition of emotions task) | | | |
| 5' | <i>GSS: testing</i> | | | |
| 30" | | Experimenter gives rapport back to "hypnotist" and leaves the room "Hypnotist" enters | | Experimenter gives rapport back to hypnotist and leaves the room "Hypnotist" enters |
| 3' | <i>2nd musical assembly</i> | | <i>Dehypnosis</i> | |
| 5'-10' | <i>Inquiry</i> | | | |
| 15' | Filling out <i>paper-and-pencil tests:</i> AIM, PCI, DIH (subject and hypnotist, separately) | | | |

Tests and waking tasks in the table:

Vividness of Visual Imagery (VVIQ) (Marks, 1973);

Laterality Test (Annett, 1970, 1985);

Ratings emotions of sentences and musical excerpts: material assembled at the Department of Affective Psychology, Faculty of Education and Psychology, Eötvös Loránd University

Rating emotions in faces and Reading from the Eyes test: Baron-Cohen, Wheelwright and Jolliffe, 1997; Baron-Cohen, Wheelwright, and Hill, 2001 (the test can be downloaded in Hungarian from http://www.autismresearchcentre.com/arc_tests; Hungarian versions made by R. Ivády);

Stroop-test: (Stroop, 1935);

Fake Smile test: based on www.bbc.co.uk/science/humanbody/mind/surveys/smiles/;

Frames task: idea from Versegly, described in Rákóczi, 2010;

Visual Imaginative Synchrony (VIS): Varga S. and Varga, 2009a, 2009b;

Ekman's recognition of emotions task based on Ekman, 2003;

Gudjonsson Suggestibility Scale (GSS): Gudjonsson, 1997.

Nova Science Publishers, Inc.

Nova Science Publishers, Inc.

APPENDIX III

System of categories for coding subjective experiences

These are the main categories of the system of categories used at the content analysis of the free reports of experiences in our studies (for the full system of categories see Varga, 1991). Appendix IV demonstrates how comprehensive the system is in comparison with sources in the literature.

Names and components of the individual categories:

ATTITUDE-group: attitude, expectation, knowledge, previous experience with hypnosis, self-characterization, situational factors, circumstances

ATTENTION-group: attention, operation, focused, distributed, inward directed (to self and inner processes), outward directed (to environment, to hypnotist)

THINKING-group: operation, logical, trance logic, thought, enlightenment, empty head, internal speech

PERCEPTION-group: operation, perception, imagination, imagery, hallucination, vividness of sensation

EMOTIONS-group: operation, emotion, peak experience, mood

MEMORY-group: operation, amnesia, hypermnesia, memory, age regression

STATE-group: state, altered state comparison (with waking state, with previous hypnosis, with sleep, with some other altered state of consciousness), level of alertness, depth of hypnosis, transition (from waking to hypnosis, from hypnosis to waking)

IDENTITY-group: feelings in body: letting go, relaxation, warmth, vegetative experiences, other bodily sensations, pain, fatigue, body image (body boundaries, size of body and its parts, proportion of body parts to each other, general feelings in body, experiencing unity of body), self-awareness

CONTROL-group: control, registering control, volition, initiative, multiple consciousness, control experience

PERFORMANCE OF TEST SUGGESTIONS: successful performance of suggestion, lack of suggested effect, special experience

ADAPTATION - how the subjects adapts to the situation: cooperates (helping, supporting, trying) or not (resisting, being stubborn, being defiant, etc.)

REALITY-group: reality testing, time sense, space sense

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Role | | | | ✓ | | | | | | | | | |
| Other | | | | | | | | | | | | | |
| Hypnotist's attitude toward subject | ✓ | | | | | | | | | | | | |
| Subject's attitude toward hypnotist | | | | ✓ | | ✓ | | | | | | ✓ | ✓ |
| Mutual attunement | | | | ✓ | | | | | | | | | |
| Emotions | | | | ✓ | | | | | | | | | |
| Bodily relation | | | | | | | | | | | | | |
| Change of relation | | | | | | | | | | | | | |
| Omnipotent hypnotist | | | | ✓ | | ✓ | | | | | | | |
| Comparison | | | | ✓ | | ✓ | | | | | | | |
| Synchrony | | | | | | | | | | | | | |
| Intimate experiences | | | | | | | | | | | | | |
| Intimate | | | | | | | | | ✓ | | | | |
| Religious | | | | | | | | | ✓ | | | | |
| Personal | | | | | | | | | | | | | |
| Troubles | | ✓ | | | | | | | | | | | |
| Work | | | | | | | | | | | | | |
| Rest | | | | | | | | | | | | | |
| Signs of distress | | | | | | | | | ✓ | | | | |

Sources summarized in the table:

A: Field, (1965): Based on the items of the test

B: Fromm, (et al., 1981; 1987-88): Content-analysis categories used in her research ("Data analysis", non-published manuscript)

C: Hilgard, (1968): Based on Table 1 of the book.

D: Kelly (quoted in Matheson et al., 1989): Based on the items of the test

E: Ludwig (1966): Study on the characteristics of altered states of consciousness

F: Matheson (et al., 1989): Based on the items of the test

G: McConkey (1986): Based on the criteria that were used to assess subjects' attitudes in relation to hypnosis (hetero-hypnosis only)

H: Pekala I. (et al., 1985, 1986): The entire test, which measures features of altered states of consciousness in general

I: Pekala II. (and Kumar, 1984, 1987): Short form of the test (PCI:SF), which measures experiences related to hypnosis only

J: Sheehan (1979): Points listed in the study

K: Tart I. (1970/b): Based on the criteria that subjects used to determine the subjective depth of their hypnotic experience

L: Tart II. (1973): Based on the profound experiences of a highly hypnotizable person

M: Vassend (1988): Based on the criteria that subjects used to determine the subjective depth of their hypnotic experience

APPENDIX V

Content analysis of subjective reports in experiments MIA and CSOPHIP

Correlations between the subjects' hypnotizability scores and the main categories of experiences in the subjective reports after hypnosis on the whole sample (n=30) and means of occurrence of contents in the main experience categories modified by text length (sd in brackets), shown by hypnotizability groups. Right columns: F values of ANOVA, increasing order of group means, and level of significance

| | SHSS: B | HGSHS (observe r score) | Low (0-4) | Mediu m (5-8) | High (9- 12) | F (2.27) | order | p |
|-------------------------------|--------------------|--|----------------------|------------------------------|-----------------------------|---------------------|--------------|----------|
| | n=30 | n=30 | n=6 | n=10 | n=14 | | | |
| ASC YES hypnosis | -.154 | -.120 | 4.52 (1.1) | 3.82 (3.2) | 4.04 (1.8) | 0.16 | M<H<L | ns |
| ASC YES tape | -.099 | -.159 | 4.92 (2.4) | 4.33 (2.7) | 4.15 (2.1) | 0.21 | H<M<L | ns |
| ASC YES / Control NO hypnosis | -.113 | -.020 | 6.46 (3.2) | 4.83 (4.0) | 5.55 (2.8) | 0.44 | M<H<L | ns |
| ASC YES / Control NO tape | -.043 | -.168 | 6.36 (2.4) | 5.9 (3.8) | 5.88 (3.0) | 0.05 | H<M<L | ns |
| ASC NO hypnosis | .218 | -.046 | 1.33 (1.5) | 1.46 (1.2) | 1.85 (1.2) | 0.44 | L<M<H | ns |
| ASC NO tape | .366* | .373* | 1.3 (1.0) | 1.28 (0.7) | 2.29 (1.8) | 1.83 | M<L<H | ns |
| ASC NO / Control YES hypnosis | .015 | -.049 | 4.04 (2.1) | 3.82 (2.3) | 4.32 (2.7) | 0.14 | H<L<M | ns |
| ASC NO / Control YES tape | .421* | .291 | 3.05 (1.2) | 4.01 (1.6) | 5.44 (2.5) | 3.17 | L<M<H | ns |

Mean occurrence of the main categories of experiences in the CSOPH study (SD in brackets) by the hypnotic susceptibility of the subjects. Right columns: F values of ANOVA, increasing order of group means, and level of significance

| | Low (0-4) | Medium (5-8) | High (9-12) | F(2.106) | order | p |
|----------------------|------------------|---------------------|--------------------|-----------------|--------------|----------|
| | n=31 | n=58 | n=20 | | | |
| ASC YES | 2.29 (3.14) | 2.12 (3.0) | 3.35 (4.49) | 1.53 | M<L<H | ns |
| ASC YES / Control NO | 3.48 (6.16) | 3.32 (5.69) | 5.65 (8.99) | 0.94 | M<L<H | ns |
| ASC NO | 0.83 (3.24) | 1.12 (4.41) | 3.25 (7.15) | 1.82 | L<M<H | ns |
| ASC NO / Control YES | 2.38 (3.18) | 2.94 (4.35) | 6.25 (6.71) | 1.94 | L<M<H | ns |

SHSS:B = Hypnotic susceptibility of the subject, as determined by the “objective” scoring in the session “with the hypnotist” (0-12)

HGSHS = Hypnotic susceptibility of the subject, as determined by the “objective” scoring in the session “with the tape” (0-12)

Hypnosis or **Tape** signs at the end of the content categories (e.g., ASC YES hypnosis or ASC NO tape): every content category was analyzed separately for the sessions with the hypnotist and with the tape. In the tape condition, every remark on the hypnotist in the subjects’ experiences refers – naturally – to the voice mediated by the tape-recorder.

n= number of cases; ns: nonsignificant, *= p<0.05

APPENDIX VI/A

PEAT: Instruction for transition to reporting subjective experiences

This is what the hypnotist said at the end of hypnosis, before reporting subjective experiences with the assistance of video-playback:

“Well, we have finished this, hypnosis is over, but we would like to ask you to remain here for a little more. As you know, this laboratory is doing research in hypnosis. In hypnosis research, it is of general interest what really happens during hypnosis. In order to make it clear what happened in this very experiment here, we would like to ask you to help us by telling us your experiences.

Since you were also an active participant of the experiment, you could probably talk more comfortably about what you thought and felt while being in it if you talked about it not to me, but to someone else. I will immediately call my colleague who will tell you how it will happen.

I say good bye to you now, and will leave the field for her now. Please remain here. Good bye.”

APPENDIX VI/B

Instruction of PEAT for reporting subjective experiences

Hello, my name is As the hypnotist has already told you, I will help you in recalling your experiences. As you know, the hypnosis session was recorded on video. Since this video recorded everything that happened exactly and in detail, it would help both of us if we watched it now. It would probably be easier for you to recall what you felt and thought than without this.

You probably felt and thought many things during the experiment that you could not tell then. Some of your impressions, reactions, or thoughts may have been so vague and uncertain that you could not have reported them then. Now, as you will watch the video-playback, you will see how you will recall these thoughts and feelings. I would like to ask you to stop the playback whenever you want to, and tell me whatever came to your mind. Whatever comes to your mind, just stop the playback immediately and tell me whatever it is. It may be just an insignificant trifle or something more relevant that you want to talk about. Regardless of how important it seems to be, whenever you want to stop the playback and want to talk about it, just do it. Every remark you make is important and valuable.

But is it very important that you immediately stop the playback as soon as you want to say something. Do not start talking before you stopped the playback.

Do you have any questions? (Answer the questions, paraphrasing the above contents, if possible.)

APPENDIX VII

The internal consistency data of AIM, PCI and DIH

The Cronbach-alpha values of the paper-and-pencil tests used in our studies. The analyses below include all hypnosis sessions in which we administered these tests in standard individual hypnosis sessions until the summer of 2012 (source: Józsa, 2012).

The reliability data (Cronbach-alpha) of Archaic Involvement Measure (AIM) in the sample of standard individual hypnosis sessions

| Total (n=1372) | | Subjects (n=904) | | Hypnotists (n=387) | |
|----------------|------|------------------------------------|------|---|------|
| AIM + | 0.94 | AIM + | 0.94 | AIM + | 0.94 |
| AIM - | 0.62 | AIM - | 0.61 | AIM - | 0.69 |
| | | <i>Admiration and attachment</i> | 0.94 | <i>Attachment and positive relationship</i> | 0.88 |
| | | <i>Fear of negative evaluation</i> | 0.87 | <i>Care and need of caring</i> | 0.90 |
| | | <i>Dependence need</i> | 0.83 | <i>Fear of negative evaluation</i> | 0.90 |
| | | | | <i>Need for control</i> | 0.86 |

The reliability data (Cronbach-alpha) of the main dimensions (in bold) and subdimensions of the Phenomenology of Consciousness Inventory (PCI) in the combined sample of the hypnosis samples (subject and hypnotists together) n=1158

| PCI main and subdimensions | Cronbach-alpha | PCI main and subdimensions | Cronbach-alpha |
|----------------------------------|----------------|----------------------------------|----------------|
| <i>Altered Experience</i> | 0.91 | <i>Attention</i> | 0.70 |
| Body image | 0.86 | Direction | 0.90 |
| Time sense | 0.90 | Concentration | 0.61 |
| Perception | 0.81 | <i>Imagery</i> | 0.84 |
| Unusual Meaning | 0.76 | Amount | 0.87 |
| <i>Positive Affect</i> | 0.77 | Vividness | 0.75 |
| Joy | 0.84 | <i>Self Awareness</i> | 0.85 |
| Sexual Excitement | 0.80 | <i>Altered Awareness</i> | 0.88 |
| Love | 0.69 | <i>Arousal</i> | 0.70 |
| <i>Negative Affect</i> | 0.76 | <i>Rationality</i> | 0.80 |
| Anger | 0.66 | <i>Volitional Control</i> | 0.70 |
| Sadness | 0.72 | <i>Memory</i> | 0.54 |
| Fear | 0.68 | <i>Internal dialogue</i> | 0.89 |

The reliability data (Cronbach-alpha) of Dyadic Interactional Harmony (DIH) questionnaire in the sample of standard individual hypnosis sessions

| DIH | Total (n=774) | Subjects (n=387) | Hypnotists (n=387) |
|--------------------|---------------|------------------|--------------------|
| Intimacy | 0.87 | 0.84 | 0.91 |
| Communion | 0.91 | 0.88 | 0.92 |
| Tension | 0.82 | 0.75 | 0.84 |
| Playfulness | 0.86 | 0.81 | 0.89 |

APPENDIX VIII

AIM administered to subjects and hypnotists (AIM+ and AIM-)

Only a few items are shown from the version of AIM administered to the subjects as an illustration. For the whole test, see Nash, M. R., Spinler, D. (1989) Hypnosis and transference: A measure of archaic involvement. *The International Journal of Clinical and Experimental Hypnosis*, 37, 129-143.

To subjects:

Name (please print): Date:

You will find different statements below. Please read them carefully and for each statement circle the number that best corresponds to your feelings under hypnosis. The increasing numbers mean gradual transitions between the two extremes. There are no correct or incorrect answers; do not think too long, just circle the number that best corresponds to your feelings under hypnosis.

| | I felt like this | | | | | | |
|---|------------------|---|---|---|---|---|-----------|
| | not at all | | | | | | Very much |
| 1. Sometimes I felt some very strong bonds to the hypnotist, like an affection that I usually feel only for parents, special teachers, and special friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. For some unknown reason, I really wanted to please the hypnotist a lot. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Every word or action of the hypnotist seemed to have an effect on my feelings. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I felt like everything the hypnotist did and said deeply mattered. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. While I was hypnotized I felt like the hypnotist was almost a perfect person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. The hypnotist felt very powerful to me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. It felt like the hypnotist was very wise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I especially admired the hypnotist. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. In a way, it was neat to share in the power of the hypnotist. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I really wanted the hypnotist to think I was OK. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. In some ways, I felt like a child relating to his/her parents rather than an adult relating to the hypnotist. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

And so on...

To hypnotists:

Name (please print): Date:

You will find different statements below. Please read them carefully and for each statement circle the number that best corresponds to your feelings under hypnosis. The increasing numbers mean gradual transitions between the two extremes. There are no correct or incorrect answers; do not think too long, just circle the number that best corresponds to your feelings under hypnosis.

| | I felt like this | | | | | | |
|---|------------------|---|---|---|---|---|-----------|
| | not at all | | | | | | very much |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Sometimes I felt very strong bonds to the subject, like an affection that one usually feels only for one's children, certain patients/students, and special friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. For some unknown reason, I really wanted to please the subject a lot. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Every word or action of the subject seemed to have an effect on my feelings. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I felt like everything the subject did and said deeply mattered. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. While I hypnotized I felt like the subject was almost a feeble person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. The subject felt destitute to me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I felt like the subject was very naive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I especially admired the subject. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. In a way, it was neat to share my power with the subject. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I really wanted the subject to strive at being OK in my eyes. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. In some ways, I felt like a parent relating to his/her child rather than an adult relating to a subject. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I felt like I was a leader and the subject was a follower. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. I wanted to take care of the subject while I hypnotized. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I wanted to tell the subject what to do. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. I wanted the subject's attention. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. When I asked what the subject couldn't do, it made me feel guilty. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|
| 17. | I was worried that the subject wouldn't like me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. | I wanted to avoid disappointing the subject. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. | I wanted to avoid the subject becoming angry with me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. | Sometimes I felt repelled by the subject, like an affection that one usually feels only for one's children, certain patients/students, and special friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. | I really wanted to oppose the subject. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. | In a way, it was bad that the subject was so small beside me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

APPENDIX IX/A

A few items from the Phenomenology of Consciousness Inventory (PCI)

The permission to use the questionnaire in our studies was granted by Ronald Pekala. The items, shown here, are for illustration purposes. The English version of PCI and the conditions for its use can be found at <http://www.quantifyingconsciousness.com>

PCI I.

Please read each statement slowly and carefully and answer as accurately as you can by circling the number between "0" and "6" that best corresponds to your subjective experience during the time period in question. Do this for each statement.

- | | | | | | | | | | |
|----|--|---|---|---|---|---|---|---|---|
| 1. | I was forever distracted and unable to concentrate on anything. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | I was able to concentrate quite well and was not distracted. |
| 2. | My thinking was clear and understandable. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | My thinking was unclear and not easy to understand. |
| 3. | The thoughts and images I had were under my control; I decided what I thought or imagined. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Images and thoughts popped into my mind without my control. |
| 4. | I had an experience which I would label as very religious, spiritual, or transcendental. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | I did not have any experience which I would label as religious, spiritual, or transcendental. |
| 5. | I became aware of very intense sexual feelings. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | I experienced no sexual feelings. |
| 6. | I was silently talking to myself a great deal. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | I did not engage in any silent talking to myself. |

| | | | |
|-----|--|---------------|---|
| 7. | I felt very, very sad. | 0 1 2 3 4 5 6 | I felt no feelings of sadness whatsoever. |
| 8. | My attention was completely directed toward my own internal subjective experience. | 0 1 2 3 4 5 6 | My attention was completely directed toward the world around me. |
| 9. | I felt ecstatic and joyful. | 0 1 2 3 4 5 6 | I felt no feelings of being ecstatic or joyful. |
| 10. | I cannot remember what I experienced. | 0 1 2 3 4 5 6 | I can remember just about everything that I experienced. |
| 11. | My body ended at the boundary between my skin and the world. and so on | 0 1 2 3 4 5 6 | I felt my body greatly expanded beyond the boundaries of my skin. |

APPENDIX IX/B

The structure of the PCI and the composition of the factor based scales

The 53 items of the PCI has to be evaluated by the categories listed in the main and subscales the first column. The columns on the right side show the factor based scales of PCI

| PCI main (in bold) and subscales | PCI factor based scales | | | | |
|----------------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------|---|
| | PCI1 DC: Dissociative control | PCI2 PA: Positive affect | PCI3 NA: Negative affect | PCI4 VI: Visual imagery | PCI5 IA: Attention to internal processes |
| Altered Experience | | | | | |
| Body image | 0.348 | 0.262 | | | |
| Time sense | 0.399 | | | | 0.446 |
| Perception | 0.325 | 0.193 | | | 0.336 |
| Unusual Meaning | 0.232 | 0.466 | | | |
| Positive Affect | | | | | |
| Joy | | 0.775 | | | |
| Sexual Excitement | | 0.604 | | | |
| Love | | 0.809 | | | |
| Negative Affect | | | | | |
| Anger | | | 0.581 | | |
| Sadness | | | 0.600 | | |
| Fear | | | 0.615 | | |
| Attention | | | | | |
| Direction | | | | | 0.411 |
| Concentration | | | | | 0.423 |
| Imagery | | | | | |
| Amount | 0.166 | | | 0.477 | |

| PCI main (in bold) and subscales | PCI factor based scales | | | | |
|----------------------------------|-------------------------------|--------------------------|--------------------------|-------------------------|--|
| | PCI1 DC: Dissociative control | PCI2 PA: Positive affect | PCI3 NA: Negative affect | PCI4 VI: Visual imagery | PCI5 IA: Attention to internal processes |
| Vividness | | | | 0.981 | -0.115 |
| Self Awareness | -0.815 | | | | |
| Altered Awareness | 0.512 | | | | 0.478 |
| Arousal | | | 0.402 | | 0.377 |
| Rationality | -0.766 | | -0.173 | | |
| Volitional Control | -0.783 | | | | |
| Memory | -0.651 | | | | |
| Internal Dialogue | -0.150 | | | | 0.377 |
| (Reliability) | | | | | |

The Main and Subscales of PCI

In the cases of the first 5 main scales, the scores on the main scales come from the combined mean values of the subscales.

The **5 factor based scales of PCI** are calculated in accordance with the method described by Kumar et al. (1996): The z-transformed values of the subscale values are weighted by the factor loadings shown in Kumar's factor analysis.

APPENDIX X

Dyadic Interactional Harmony Questionnaire

Date:

Name:

Please consider your **recent interaction**.

Please indicate how much the following features characterized your recent interaction.

Circle the corresponding number 1 meaning: *not at all*

5 meaning: *completely*

The numbers in between indicate gradual steps between the two extremes.

| | | | |
|----------------------|-------------------|-----------------|-------------------|
| 2. SYMPATHY | 1 - 2 - 3 - 4 - 5 | SELF-DISCLOSURE | 1 - 2 - 3 - 4 - 5 |
| 2. COOPERATION | 1 - 2 - 3 - 4 - 5 | 4. TENSION | 1 - 2 - 3 - 4 - 5 |
| 4. ANXIETY | 1 - 2 - 3 - 4 - 5 | 3. OPENNESS | 1 - 2 - 3 - 4 - 5 |
| 2. MUTUAL CONFIDENCE | 1 - 2 - 3 - 4 - 5 | DOMINANCE | 1 - 2 - 3 - 4 - 5 |
| 4. CONSTRAINED | 1 - 2 - 3 - 4 - 5 | 1. TENDERNESS | 1 - 2 - 3 - 4 - 5 |
| 2. ATTUNEMENT | 1 - 2 - 3 - 4 - 5 | 2. HARMONY | 1 - 2 - 3 - 4 - 5 |
| 2. UNDERSTANDING | 1 - 2 - 3 - 4 - 5 | RIGOUR | 1 - 2 - 3 - 4 - 5 |
| SUBORDINATION | 1 - 2 - 3 - 4 - 5 | 3. HUMOUR | 1 - 2 - 3 - 4 - 5 |
| 1. LIKING | 1 - 2 - 3 - 4 - 5 | 1. INTIMACY | 1 - 2 - 3 - 4 - 5 |
| 2. PATIENCE | 1 - 2 - 3 - 4 - 5 | CLUMSINESS | 1 - 2 - 3 - 4 - 5 |

| | | | |
|-------------------------|-------------------|--------------------------|-------------------|
| 4. RELAXED | 1 - 2 - 3 - 4 - 5 | EXCITEMENT | 1 - 2 - 3 - 4 - 5 |
| COMPETITION | 1 - 2 - 3 - 4 - 5 | 3. PLAYFULNESS | 1 - 2 - 3 - 4 - 5 |
| BOREDOM | 1 - 2 - 3 - 4 - 5 | 2. ACCORD/ CONSONANCE | 1 - 2 - 3 - 4 - 5 |
| 1. CORDIAL | 1 - 2 - 3 - 4 - 5 | 1. INTIMATE | 1 - 2 - 3 - 4 - 5 |
| RESERVE | 1 - 2 - 3 - 4 - 5 | 4. DEFENSELESSNESS | 1 - 2 - 3 - 4 - 5 |
| 1. EROTICISM/SENSUALITY | 1 - 2 - 3 - 4 - 5 | SHALLOWNESS | 1 - 2 - 3 - 4 - 5 |
| 1. HAPPINESS | 1 - 2 - 3 - 4 - 5 | 1. WARMTH | 1 - 2 - 3 - 4 - 5 |
| 2. MUTUAL ATTENTION | 1 - 2 - 3 - 4 - 5 | 3. INSPIRING | 1 - 2 - 3 - 4 - 5 |
| SINCERITY | 1 - 2 - 3 - 4 - 5 | 2. MUTUALITY | 1 - 2 - 3 - 4 - 5 |
| REJECTION | 1 - 2 - 3 - 4 - 5 | ABANDONED | 1 - 2 - 3 - 4 - 5 |
| INFORMALITY | 1 - 2 - 3 - 4 - 5 | 3. AGITATING | 1 - 2 - 3 - 4 - 5 |
| 1. LOVE | 1 - 2 - 3 - 4 - 5 | 3, 4 EASY-FLOWING | 1 - 2 - 3 - 4 - 5 |
| 4. FEAR | 1 - 2 - 3 - 4 - 5 | 1. PASSION | 1 - 2 - 3 - 4 - 5 |
| 3. FREEDOM | 1 - 2 - 3 - 4 - 5 | DISTANCE | 1 - 2 - 3 - 4 - 5 |
| PERSONAL | 1 - 2 - 3 - 4 - 5 | CLOSENESS | 1 - 2 - 3 - 4 - 5 |

The numbers before the items indicate the subscale to which the item belongs (1. Intimacy, 2. Communion, 3. Playfulness, 4. Tension). Items without a number do not load on any factor based subscales. Note 1: “easy-flowing” and “relaxed” items score inversely in the “Tension” subscale. Note 2: Naturally, the numbers before the items were omitted from the questionnaire given to the participants.

APPENDIX XI

Data of factor analysis of DIH in the Joint Rorschach Situation

| Factor | Variance explained | Cumulative variance in the data in the factor space | | Cronbach's alpha |
|--------|--------------------|---|--------|------------------|
| 1 | 10.5645 | 0.4173 | 0.5442 | 0.9715 |
| 2 | 4.0842 | 0.5786 | 0.7545 | |
| 3 | 2.0519 | 0.6596 | 0.8602 | |
| 4 | 1.6142 | 0.7234 | 0.9434 | |
| 5 | 1.0997 | 0.7668 | 1.0000 | |

Rotated, sorted factor values (Joint Rorschach situation)

| ITEMS | FACTOR1 | FACTOR2 | FACTOR3 | FACTOR4 |
|----------------------|--------------|---------|---------|---------|
| PASSION | 0.665 | 0.000 | 0.000 | 0.000 |
| INTIMACY | 0.656 | 0.000 | 0.000 | 0.000 |
| INTIMATE | 0.626 | 0.000 | 0.000 | 0.000 |
| WARMTH | 0.618 | 0.000 | 0.000 | 0.000 |
| EROTICISM/SENSUALITY | 0.614 | 0.000 | 0.000 | 0.000 |
| TENDERNESS | 0.609 | 0.000 | 0.000 | 0.000 |
| LOVE | 0.585 | 0.000 | 0.000 | 0.000 |

| ITEMS | FACTOR1 | FACTOR2 | FACTOR3 | FACTOR4 |
|-------------------------|--------------|--------------|--------------|---------------|
| HAPPINESS | 0.545 | 0.000 | 0.380 | 0.000 |
| CORDIAL | 0.534 | 0.253 | 0.000 | 0.000 |
| LIKING | 0.453 | 0.332 | 0.000 | 0.000 |
| ACCORD / CONSONANCE | 0.000 | 0.643 | 0.000 | 0.000 |
| UNDERSTANDING | 0.000 | 0.620 | 0.000 | 0.000 |
| HARMONY | 0.270 | 0.588 | 0.000 | 0.000 |
| MUTUAL ATTENTION | 0.000 | 0.580 | 0.260 | 0.000 |
| MUTUALITY | 0.000 | 0.565 | 0.296 | 0.000 |
| ATTUNEMENT | 0.000 | 0.537 | 0.000 | 0.000 |
| COOPERATION | 0.000 | 0.535 | 0.000 | 0.000 |
| SYMPATHY | 0.324 | 0.472 | 0.000 | 0.000 |
| MUTUAL CONFIDENCE | 0.258 | 0.493 | 0.000 | 0.000 |
| PATIENCE | 0.000 | 0.474 | 0.000 | 0.000 |
| OPENNESS | 0.000 | 0.319 | 0.582 | 0.000 |
| HUMOUR | 0.000 | 0.000 | 0.565 | 0.000 |
| INSPIRING | 0.363 | 0.000 | 0.554 | 0.000 |
| PLAYFULNESS | 0.000 | 0.000 | 0.551 | 0.000 |
| FREEDOM | 0.000 | 0.000 | 0.480 | -0.430 |
| AGITATING | 0.375 | 0.000 | 0.496 | 0.000 |
| EASY-FLOWING | 0.000 | 0.000 | 0.511 | -0.513 |
| TENSION | 0.000 | 0.000 | 0.000 | 0.644 |
| ANXIETY | 0.000 | 0.000 | 0.000 | 0.599 |
| FEAR | 0.000 | 0.000 | 0.000 | 0.588 |
| RELAXED | 0.000 | 0.000 | 0.000 | -0.553 |
| CONSTRAINED | 0.000 | 0.000 | 0.000 | 0.455 |
| DEFENSELESSNESS | 0.000 | 0.000 | 0.000 | 0.461 |
| Cronbach's alpha | 0.85 | 0.86 | 0.81 | 0.78 |

Note: "RELAXED" item scores inversely in the "Tension" scale.

APPENDIX XII

Categories used in TACT-based analysis

Categories describing the experiences of the subjects

- **subject feels:** all comments expressing the subject's feelings (e.g.: I felt, I feel)
- **subject thinks:** words expressing the subject's thinking (e.g.: it occurred to me, I thought)
- **subject controls:** the subject is not obeying the suggestion, but experiences the situation consciously, expresses volition (e.g.: I know, I did, I wanted, I made)
- **subject sees:** words expressing vision (e.g.: I can see, I saw)
- **subject ASC (altered state of consciousness):** experiences different from normal wakeful state

- **subject speaks:** comments related to expressions of experience (e.g.: I speak, I talk)
- **subject unable to do / know:** anything signaling the subject's inability to do something (e.g.: I don't know)
- **subject negates:** all words signaling that the subject did not do something (e.g.: I did not see, I did not feel, I did not know)
- **subject can:** signaling that the subject knows / can do something (e.g.: I know, I can, I knew)
- **ambivalent:** signals ambivalence or dissonance in the experience
- **uncertain:** when the subject experiences something as uncertain (e.g.: perhaps, maybe, let's say, I'm not sure, possibly, probably)
- **certain:** when the subject experiences something as certain (e.g.: certain, straightforward)
- **disappointment:** the feeling of disappointment is present in the experience (e.g.: I was disappointed, I was surprised)
- **self-reference:** the subject's self-referential comments, first-person singular (e.g.: from me, inside of me, to me, me, for me, myself)
- **pain:** signaling painful experiences (e.g.: it hurts)
- **hierarchical, archaic:** words expressing the hierarchical relationship between the subject and the hypnotist, and related expressions of strong emotional attachment (e.g.: humility, God)
- **about hypnotist:** any comment by the subject about the hypnotist (e.g.: s/he did/said, for him/her, s/he reads)
- **time sequence:** words expressing the temporal succession of events (e.g.: first, until now, later, after, finally)
- **interaction:** words expressing the relationship between the subject and the hypnotist (e.g.: each other)
- **negative:** any comments that is negative in any way (e.g.: scary, bad, problem)
- **non-ASC:** characteristics of the normal waking state, no sign of an altered state (e.g.: I didn't feel, I was thinking)
- **reasoning:** words used to explain a certain event (e.g.: because, therefore)
- **positive:** any positive expression (e.g.: success, good, I liked it)
- **body:** statements related to body parts (e.g.: face, head, my hand, nose, his/her forehead, his/her finger, eye)

Categories describing the experiences of the hypnotists

- **subject control:** the subject is not obeying suggestions, but experiences the situation consciously and acts out of will (e.g.: s/he wanted, s/he knows, s/he knew)
- **subject ASC:** subject experiences that differ from the normal waking state (e.g.: his/her fantasy, s/he sunk back, s/he is numb)
- **subject negate:** corresponds to words expressing that the subject did not accomplish something (e.g.: didn't want to, couldn't bear, didn't feel)
- **negative about subject:** the hypnotist's negative expressions about the subject (e.g.: I don't like, I don't prefer, clumsy)

- **positive about subject:** positive comments of the hypnotist about the subject (e.g.: helpful, sweet, I've grown to like him/her, likeable, I like him/her)
- **about subject:** any comment about the subject (e.g.: s/he felt, s/he immersed, wrote, imagines)
- **asynchronous:** hypnotist reporting of a lack of synchrony (e.g.: asynchronous, bizarre, dissonance, we are not together)
- **uncertain:** when the hypnotist experiences something as being uncertain (e.g.: unsettling, possibly, as if, I don't know, I speculate, maybe, hesitant, I was unsure)
- **certain:** when the hypnotist experiences something as being certain (e.g.: certain, straightforward, I knew, I know)
- **disappointment:** the feeling of disappointment is present somehow in the experience (e.g.: I was disappointed, I was shocked, I was amazed, I was surprised, I didn't expect)
- **encourage, support:** the hypnotist is doing his/her best so succeed (e.g.: I supported, I encouraged, I serve)
- **self-ref:** self-referential statements by the hypnotist, first-person singular (e.g.: mine, to me, my soul, me, about me)
- **interesting, important:** what the hypnotist considered to be interesting (e.g.: interesting, important, most interesting)
- **suspicion:** expresses a suspicion on the part of the hypnotist that something might not be OK with the subject (e.g.: strange, suspicious, doubt, surprise)
- **hypnotist feels:** words expressing any feelings on the hypnotist's part (e.g.: I felt, my feelings, my emotions)
- **hypnotist pays attention:** words expressing any observations by the hypnotist (e.g.: I observe, I observed)
- **hypnotist thinks:** words expressing the hypnotist's thinking (e.g.: I thought about, my impression, my idea, I believe)
- **hypnotist control:** when the hypnotist is consciously, willingly controlling the situation (e.g.: I gave, I want, I did, I decided, I controlled, I asked)
- **hypnotist sees, looks:** terms expressing this (I saw, I looked at)
- **hypnotist ASC:** experiences of the hypnotist that differ from his/her normal waking state (e.g.: I experienced, I was immersed, I imagined, I meditated)
- **hypnotist says:** terms expressing this (e.g.: I said, let me say, I should say)
- **hypnotist does not pay attention:** terms expressing this (e.g.: I do not pay attention, I could not pay attention)
- **hypnotist no:** all words that negate that the hypnotist did something (e.g.: I did not give, I do not want to, I did not say, I did not expect)
- **registering hypnotist control:** denotes that the hypnotist is very present and follows the events (e.g.: I sensed, I noticed, I paid attention, I saw, I registered)
- **hypnotist plans:** denoting that the hypnotist is actively planning and shaping the course of the hypnosis (e.g.: I used, I intervened, I initiated, in order to shape, I structured)
- **time-sequence:** words expressing the temporal succession of events (e.g.: first, up to now, later, after, finally)

- **interaction:** words describing the relationship between the subject and the hypnotist (e.g.: intimate, together, attunement, connection, mutual, s/he cooperated)
- **negative:** any negative statement (e.g.: upsetting, anger, evil, I was afraid)
- **reasoning:** words used to explain any event (e.g.: because, due to, therefore)
- **positive:** any positive statement (e.g.: I praised, I enjoyed, beautiful, valuable, fun, great)
- **professional:** professional terminology about hypnosis and its administration (e.g.: amnesia, coping, dehypnosis, dissociation, induction, utilize)
- **performance orientation:** expressions about the performance of the subject (e.g.: it won't work, it didn't work, success, performs)
- **body:** any statement about the body (e.g.: face, head, his/her hand, my leg)

APPENDIX XIII/A, B, C

Detailed results of the twin study

a. Comparison of the means of the PCI and DIH Subscales of the Groups

| PCI subscale | PCI averages of Ss | | | | | Tukey Post Hoc test | | |
|---------------------------------|--------------------|---------------|---------------|---------------|---------------|---------------------|-------|-------------------|
| | | MZ twins | DZ twins | SIBL | Parent-Child | df | F | Post Hoc |
| Dissociative control | x= SD= | -0.00 3.47 | 0.46 3.76 | 1.14 3.28 | 0.19 3.19 | 3.273 | 1.37 | MZ = DZ = SB = PC |
| Positive affect | x= SD= | 0.14 2.08 | -0.41 1.89 | 0.34 2.21 | -0.44 2.06 | 3.273 | 2.52 | MZ = DZ = SB = PC |
| Negative affect | x= SD= | 0.09 2.02 | 0.18 1.68 | -0.12 1.38 | -0.25 1.28 | 3.273 | 0.62 | MZ = DZ = SB = PC |
| Visual Imagery | x= SD= | 0.15 1.24 | 0.00 1.43 | 0.18 1.47 | 0.04 1.32 | 3.273 | 0.24 | MZ = DZ = SB = PC |
| Attention to internal processes | x= SD= | -0.11 1.32 | 0.25 1.59 | 0.68 1.30 | 0.12 1.32 | 3.273 | 3.64* | MZ < SB |

b. Intraclass Correlations of Hypnotists hypnotizing the two members of twins, on the subscales of PCI and DIH

| H-H Intraclass correlation PCI | PCI Dissociative Control | PCI Positive affect | PCI Negative affect | PCI Visual imagery | PCI Attention to internal processes |
|--------------------------------|--------------------------|---------------------|---------------------|--------------------|-------------------------------------|
| Monozygotic twins | 0.07 | -0.05 | 0.06 | 0.08 | 0.08 |
| Dizygotic twins | 0.02 | 0.10 | -0.22 | 0.02 | 0.01 |
| Siblings | 0.06 | -0.13 | -0.06 | -0.06 | 0.15 |
| Parent-Child pairs | -0.11 | -0.18 | 0.00 | 0.10 | -0.23 |

| H-H Intraclass correlations DIH | DIH Intimacy | DIH Communion | DIH Playfulness | DIH Tension |
|--|---------------------|----------------------|------------------------|--------------------|
| Monozygotic twins | -0.11 | 0.01 | -0.02 | -0.08 |
| Dizygotic twins | 0.15 | 0.02 | 0.23 | -0.36 |
| Siblings | -0.40 | 0.06 | 0.00 | 0.08 |
| Parent-Child pairs | -0.05 | -0.05 | -0.08 | -0.18 |

c. Intraclass Correlations of the same-sex DZ twins on the subscales of PCI and DIH

| S-S Intraclass correlations PCI | PCI Dissociative Control | PCI Positive affect | PCI Negative affect | PCI Visual imagery | PCI Attention to internal processes |
|--|---------------------------------|----------------------------|----------------------------|---------------------------|--|
| Same-sex dizygotic twins (N=22) | 0.31 | 0.27 | 0.28 | 0.54** | 0.23 |

| S-S Intraclass correlations DIH | DIH Intimacy | DIH Communion | DIH Playfulness | DIH Tension |
|--|---------------------|----------------------|------------------------|--------------------|
| Same-sex dizygotic twins (N=22) | 0.27 | 0.41** | 0.16 | 0.05 |

(* p < .05; ** p < .01)

Nova Science Publishers, Inc.

REFERENCES

- Adrian, C. (1996). Therapist sexual feelings in hypnotherapy: Managing therapeutic boundaries in hypnotic work. *The International Journal of Clinical and Experimental Hypnosis*, 44(1), 20-32.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E. & Wall, S. (1978). *Patterns of Attachment: Assessed in the Strange Situation and at Home*. Hillsdale: Erlbaum.
- Albrecht, T. L., Burleson, B. R. & Goldsmith, D. (1994). Supportive communication. In: Knapp, M. L. and Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi: 419-449.
- Alden, P. & Heap, M. (1998). Hypnotic pain control: Some theoretical and practical issues. *International Journal of Clinical and Experimental Hypnosis*, 46(1), 62-76.
- Altman, I. (1990). Conceptualizing „Rapport“. *Psychological Inquiry*, 1(4), 294-297.
- Angus, L. E. & Rennie, D. L. (1988). Therapist participation in metaphor generation: Collaborative and non-collaborative styles. *Psychotherapy*, 25(4), 552-560.
- Annett, M. (1970). A classification of handpreference by association analysis. *The British Journal of Psychology*, 61(3), 303-321.
- Annett, M. (1985). *Left, right, hand and brain: the right shift theory*. London, Hillsdale: Lawrence Erlbaum Associates.
- Argyle, M. (1988). *Bodily communication*. Routledge, London.
- Argyle, M. (1990). The biological basis of rapport. *Psychological Inquiry*, 1(4), 297-300.
- Argyris, C. (1968). Some unintended consequences of rigorous research. *Psychological Bulletin*, 70, 185-197.
- Aries, E. (1996). *Men and women in interaction*. Oxford University Press, New York, Oxford.
- Arnold, D., Calhoun, L. G., Tedeschi, R. & Cann, A. (2005). Vicarious posttraumatic growth in psychotherapy. *Journal of Humanistic Psychology*, 45, 239-263,
- Arrindell, W. A., Sanavio, E., Aguilar, G., Sica, C., Hatzichristou, C., Eisemann, M., Recinos, L. A., Gaszner, P., Peter, M., Battagliese, G., Kállai, J. & van der Ende, J. (1999). The development of a short form of the EMBU: Its appraisal with students in Greece, Guatemala, Hungary, and Italy. *Personality and Individual Differences*, 27, 613-628.
- Ås, A. (1962). Non-hypnotic experiences related to hypnotizability in male and female college students. *Scandinavian Journal of Psychology*, 3, 112-121.

- Ås, A. & Lauer, L. W. (1962b). A factor-analytic study of hypnotizability and related personal experiences. *The International Journal of Clinical and Experimental Hypnosis*, 10(3), 169-181.
- Ås, A., O'Hara, J. W. & Munger, M. P. (1962a). The measurement of subjective experiences presumably related to hypnotic susceptibility. *Scandinavian Journal of Psychology*, 3, 47-64.
- Atkinson, J. M. & Heritage, J. (1984). *Structures of social action*. Cambridge University Press, Cambridge.
- Bácsi, B. (2011). *Interakciós harmónia és kötődés. Interakciók szubjektív élményének vizsgálata romantikus partnerrel*. Szakdolgozat, ELTE PPK, Pszichológia szak. Témavezető: Varga K. Kézirat.
- Bagdy, E. (2002). *Párkapcsolatok dinamikája*. Animula, Budapest.
- Bagdy, E., Baktay G. & Mirnics Zs. (2006). *Pár- és családi kapcsolatok vizsgálata*. Digitális tankönyv, HEFOP-Bölcsész Konzorcium, Budapest. Online: <http://www.webcreator.hu/tankonyv/>.
- Bailly, J-S. (2002). Secret report on mesmerism or animal magnetism. *The International Journal of Clinical and Experimental Hypnosis*, 50 (4), 364-368.
- Baker, E. L. (1987). The state of the art of clinical hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 35, 203-214.
- Baker, E. L. (2000). Reflections on the hypnotic relationship: Projective identification, containment, and attunement. *The International Journal of Clinical and Experimental Hypnosis*, 48(1), 56-69.
- Baker, E. L. & Nash, M. R. (2008). Psychanalytic approaches to clinical hypnosis. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 439-456.
- Balken, J. (2007). L' Accordage des Inconscients. *Hypnose*, 17(1).
- Balthazard, C. G. (1990). The hypnosis scales at their centenary: Some fundamental issues still unresolved. *The International Journal of Clinical and Experimental Hypnosis* 41(1), 47-73.
- Balthazard, C. G. & Woody, E. Z. (1992). The spectral analysis of hypnotic performance with respect to "absorption". *The International Journal of Clinical and Experimental Hypnosis*, 15(1), 21-43.
- Bányai, É. (2008a). A hipnózis szociálpszichobiológiai modellje. In: Bányai É., Benczúr L. (szerk.) *A hipnózis és hipnoterápia alapjai. Szöveggyűjtemény*. ELTE Eötvös Kiadó, Budapest, 379-429.
- Bányai, É. (2008b). A hipnoterápia mint önálló pszichoterápiás modalitás. In: Bányai É., Benczúr L. (szerk.) *A hipnózis és hipnoterápia alapjai. Szöveggyűjtemény*. ELTE Eötvös Kiadó, Budapest, 543-558.
- Bányai, É. I. (2002a). Communication in different styles of hypnosis, In: Hoogduin, C.A.L., Schaap, C.P.D.R., de Berk, H.A.A. (ed.) *Issues on hypnosis*, Nijmegen: Cure & Care, 1-20.
- Bányai, É. (1993c). A módosult tudatállapotok pszichofiziológiai jellemzői. In: *Agykutatás és kísérleti pszichológia*. Az "Emberi erőforrások fejlesztése" c. világbanki támogatással rendezett önképzési tanfolyam anyaga. Budapest: MTA Pszichológiai Intézete, 59-87.

- Bányai, É. I. (1980). A New Way to Induce a Hypnotic-Like Altered State of Consciousness: Active-Alert Induction. In L. Kardos, and C. Pléh (Ed.) *Problems of the Regulation of Activity*, Akadémiai Kiadó, Budapest, 261–273.
- Bányai, É. I. (1985a). Interaction between hypnotist and subject: A social psychophysiological approach. *Invited paper presented at the 93rd Annual Meeting of the American Psychological Association*, Los Angeles CA, August 1985.
- Bányai, É. I. (1985b). A social psychophysiological approach to the understanding of hypnosis: The interaction between hypnotist and subject. *Hypnos. Swedish Journal of Hypnosis in Psychotherapy and Psychosomatic Medicine*, 12, 186-210.
- Bányai, É. I. (1991). Toward a social-psychobiological model of hypnosis. In: Lynn, J. L., Rhue, J. W. (ed.) *Theories of hypnosis. Current models and perspectives*. Guilford Press, New York, 564-600.
- Bányai, É. I. (1998). The interactive nature of hypnosis: research evidence for a social-psychobiological model. *Contemporary Hypnosis*, 15(1), 52-63.
- Bányai, É. I. (2002b). *Hypnosis and mainstream psychology*. In Peter B. Bongartz, W., Revenstorf, D., Butollo, W. (ed.) *Munich 2000. The 15th International Congress of Hypnosis*. Hypnosis international Monographs: 6. Munich: MEG Stiftung, 1-13.
- Bányai, É. I. (2011). Unintended suggestions, social „messages” from the perspective of an expert cancer-patient: A personal account. In: Varga, K. (ed.) *Beyond the words: Communication and Suggestion in Medical Practice*. New York: Nova Science Publishers Inc., 337-349.
- Bányai, É. I., Gösi-Greguss, A. C., Vágó, P., Varga, K. & Horváth, R. (1990). Interactional Approach to the Understanding of Hypnosis: Theoretical Background and Main Findings. In: Van Dyck, R., Spinhoven, Ph., Van der Does, A. J. W., Van Rood, Y. R., De Moor, W. (ed.) (1990) *Hypnosis: Current theory, research and practice*. Amsterdam Free University Press. 53-69.
- Bányai, É. I. & Hilgard. E. R. (1976). Comparison of active-alert hypnotic induction with traditional relaxation induction. *Journal of Abnormal Psychology*, 85(2), 218-224.
- Bányai, É. I., Mészáros, I. & Csókay, L. (1982). Interaction Between Hypnotist and Subject: A Social Psychophysiological Approach. Abstract. *The International Journal of Clinical and Experimental Hypnosis*, 30, 193.
- Bányai, É. I., Mészáros, I. & Csókay, L. (1985). Interaction between hypnotist and subject: A social psychophysiological approach. (Premilinary report). In: Waxman, D., Misra, P. C., Gibson, M., and Basker, M. A. (ed.) *Modern trends in hypnosis*. New York and London: Plenum Press, 97-108.
- Bányai, É. I., Mészáros, I. & Gösi-Greguss, A. C. (1980). Active-alert hypnosis: Psychological and physiological characteristics. In Pajntar, M., Roskar, E., Lavric, M. (ed.) *Hypnosis in psychotherapy and psychosomatic medicine*. Ljubljana: University Press, 39–43.
- Bányai, É. I., Mészáros, I. & Greguss, A. C. (1983). Psychophysiological comparison of active-alert and traditional relaxation hypnosis. In Sinz, R., Rosenzweig, M. R. (Eds.) *Psychophysiology*. Jena (GDR) and Amsterdam (Netherlands): VEB Gustav Fischer Verlag and Elsevier Biomedical Press, 225–230.
- Bányai, É. I., Zseni, A. & Túry, F. (1993). Active-alert hypnosis in psychotherapy In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis* American Psychological Association, Washington, DC 271-290.

- Bányai, É., Varga K. & Gősiné Greguss A. (2001). Szuggesztív egyéniségek: archaikus bevonódás tanárok és hipnotizőrök között. In: Pléh Cs. László J. Oláh A. (szerk.) *Tanulás, kezdeményezés, alkotás*. ELTE Eötvös Kiadó Budapest, 313-336.
- Barabasz, A. F. & Barabasz, M. (2006). Effects of Tailored and Manualized Hypnotic Inductions for Complicated Irritable Bowel Syndrome Patients. *The International Journal of Clinical and Experimental Hypnosis*, 54(1), 100-112.
- Barabasz, A. F. & Barabasz, M. (2008). Hypnosis and the brain. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 337-363.
- Barber, J. (1998a). The mysterious persistence of hypnotic analgesia. *International Journal of Clinical and Experimental Hypnosis*, 46(1), 28-43.
- Barber, J. (1998b). When hypnosis causes trouble. *The International Journal of Clinical and Experimental Hypnosis*, 46(2), 157-170.
- Barber, J. (2008). Reclaiming the cognitive unconscious: integrating hypnotic methods and cognitive-behavioral therapy. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 457-465.
- Barber, J. G., Bolitho, F. & Bertrand, L. (2001). Parent-Child Synchrony and Adolescent Adjustment. *Child and Adolescent Social Work Journal*, 18(1), 51- 64.
- Barber, T. X. (1999). Hypnosis: A mature view. *Contemporary Hypnosis*, 16, 123–127.
- Barber, T. X. & Wilson, S. C. (1977). Hypnosis, suggestion and altered states of consciousness: Experimental evaluation of the new cognitive-behavioral theory and the traditional trance-state theory of hypnosis. *Annals of the New York Academy of Sciences*, 296, 34-47.
- Barnes, M. K. & Duck, S. (1994). Everyday communicative context for social support. In: Burleson, B. R., Albrecht, T. L., Sarason, I. G. (ed.) *Communication of social support*. Sage Publications, Thousand Oaks, London, 175-194.
- Barnett, S., Buckroyd, J. & Windle, K. (2005). Eating disorders from parent to child: Mothers' perceptions of transgenerational effect. *Counselling and Psychotherapy Research*, 5(3), 203-211.
- Barnier, A. J. & McConkey, K. M. (1999). Hypnotic and posthypnotic suggestion: Finding meaning in the message of the hypnotist. *The International Journal of Clinical and Experimental Hypnosis*, 47(3), 192-208.
- Barnier, A. J. & Nash, R. N. (2008). Introduction: a roadmap for explanation, a working definition. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 2-18.
- Baron-Cohen, S., Wheelwright, S. & Hill, J. (2001). The 'reading the mind in the eyes' test, revised version: a study with normal adults with Asperger Syndrome or high-functioning Autism. *Journal of Child Psychology and Psychiatry* 42, 241-252.
- Baron-Cohen, S., Wheelwright, S. & Hill, J. (2001). The 'Reading the mind in the eyes' test revised version: A study with normal adults, and adults with Asperger Syndrome or High-Functioning autism. *Journal of Child Psychology and Psychiatry*, 42, 241–252.
- Baron-Cohen, S., Wheelwright, S. & Jolliffe, T. (1997). Is there a "language of the eyes"? Evidence from normal adults and adults with autism or Asperger syndrome. *Visual Cognition*, 4, 311–331.

- Bartz, J. A., Zaki, J., Ochsner, K. N., Bolger, N., Kolevzon, A., Ludwig, N. & Lyndon, J. E. (2010). Effects of oxytocin on recollections of maternal care and closeness. *Proceedings of the National Academy of Sciences*, 107(50), 21371-21375.
- Bates, B. L. (1993). Individual differences in response to hypnosis. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 23-54.
- Baumeister, R. F. & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117 (3), 497-529.
- Behrs, J. O. (1986). The special process controversy: What is at issue? *The Behavioral and Brain Sciences*, 9, 467-468.
- Behrs, J. O. (1989). Spontaneous hypnosis in the forensic context. *The Bulletin of the American Academy of Psychiatry and the Law*, 17, 171-181.
- Beebe, B., Gerstman, L., Dolins, M., Zigman, A., Rosenzweig, H., Faughey, K., & Korman, M. (1982b). Rhythmic communication in the mother-infant dyad. In: Davis, M. (ed.) *Interaction rhythms. Periodicity in communicative behavior*. New York, Human Sciences Press, 79-100.
- Béleczi, N. (2011). *A diádikus interakciós harmónia kialakulását befolyásoló tényezők*. Szakdolgozat, ELTE PPK, Pszichológia szak. Témavezető: Varga K. Kézirat.
- Belsky, J. (1999). Interactional and contextual determinants of attachment security. In: Cassidy, J. and Shaver, P.R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London, 249-264.
- Berezkei, T. (2003). *Evolúciós pszichológia*. Budapest, Osiris.
- Berger, C. R. (1994). *Power, dominance and social interaction*. In: Knapp, M. L. and Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi. 450-507.
- Bergman, M., Trenter, E. & Kallio, S. (2003). Swedish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 51(4), 348-356.
- Bernieri, F. J. (1988). Coordinated movement and rapport in teacher-student interactions. *Journal of Nonverbal Behavior*, 12 (2), 120-138.
- Bernieri, F. J. (1991). Interpersonal sensitivity in teaching interactions. *Personality and Social Psychology Bulletin*, 17, 98-103.
- Bernieri, F. J., Davis, J. M., Rosenthal, R. & Knee, R. C. (1994). Interactional synchrony and rapport: Measuring synchrony in displays devoid of sound and facial affect. *Personality and Social Psychology Bulletin*, 20(3), 303-311.
- Bernieri, F. J., Gillis, J. S., Davis, J. M. & Grahe, J. E. (1996). Dyad Rapport and Accuracy of Its Judgment Across Situations: A Lens Model Analysis. *Journal of Personality and Social Psychology*, 71(1), 110-129.
- Bernieri, F. J. & Gillis, J. S. (1995). The judgement of rapport: A cross-cultural comparison between Americans and Greeks. *Journal of Nonverbal Behavior*, 19, 115-130.
- Bernieri, F. J., Reznick, J. S. & Rosenthal, R. (1988). Synchrony, pseudosynchrony, and dissynchrony: Measuring the entrainment process in mother-infant interactions. *Journal of Personality and Social Psychology*, 54, 243-253.

- Bernieri, F. J. & Rosenthal, R. (1991). Interpersonal coordination: Behavior matching and interactional synchrony. In: Feldman, R. S., Rimé, B. (ed.) *Fundamentals of nonverbal behavior*. Cambridge University Press, Cambridge, 401-431.
- Biró, E. (2003). Interakciós szinkronicitás az interperszonális adaptációban. *Magyar Pszichológiai Szemle*, 58(3), 341-362.
- Biró, E. (2004). A viselkedésben megnyilvánuló interakciós szinkronitás vizsgálatának módszertani problémái. *Magyar Pszichológiai Szemle*, 59(4), 471-492.
- Biró, E. (2005). *Interakciós szinkronitás hipnózisban*. Doktori disszertáció, ELTE, Budapest.
- Biró, E. & Bányai É. (2007). Interakciós szinkronitás hipnózisban. Megbízható-e az egészszleges megítélés? *Magyar Pszichológiai Szemle*, 62(3), 369-394.
- Bloom, P. B. (1993a). Training issues in hypnosis. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 673-690.
- Bloom, P. B. (1993b). Finding ones voice: The art and process of becoming a therapist. In: Bölcs E. (ed.) *Hypnosis connecting disciplines 57-62*. Medizinisch-Pharmazeutische Verlagsgesellschaft m.b.H. Vienna.
- Boersma, P. & Weenink, D. (2001). Praat 4.0 a system for doing phonetics by computer. (www.praat.org)
- Bognár Zs., Varga K., Bányai É. & Gösi-Greguss A. (2002). The subjective experiences of both the hypnotist and the subject in the real-simulating paradigm. In: Peter, B., Bongartz, W., Revenstorf, D., Butollo, W. (ed.) *The 15th International Congress of Hypnosis. Hypnosis International Monographs Number 6*. MEG-Stiftung: München, 199-207.
- Bognár, Zs. (1998). *Hipnózisélmények vizsgálata valós-szimulátor modellben*. Szakdolgozat, ELTE BTK, Pszichológia szak, Kézirat.
- Bognár, Zs., Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (2000). The subjective experiences of both the hypnotist and the subject in the real-simulating paradigm. *Paper presented at the 15th International Congress of Hypnosis*, Munich, Germany, October 2-7, 2000.
- Bongartz, W. (1985). German norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 33(2), 131-140.
- Boukydis, Z. (2012). *Collaborative consultation with parents and infants in the perinatal period*. Baltimore, MD: Brookes Publishing Company.
- Bowers, K. S. (1981). Do the Stanford Scales Tap the "Classic Suggestion Effect?" *The International Journal of Clinical and Experimental Hypnosis*, 29, 42-53.
- Bowers, K. S. (1992). Imagination and dissociation in hypnotic responding. *The International Journal of Clinical and Experimental Hypnosis*, 15(4), 253-275.
- Bowers, K. S. (1998). Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C. Manual and response booklet. *The International Journal of Clinical and Experimental Hypnosis*, 46(3), 250-268.
- Bowers, P. G., Laurence, J. R. & Hart, D. (1988). The experience of hypnotic suggestions. *International Journal of Clinical and Experimental Hypnosis*, 36, 336-349.
- Bowlby, J. (1969). *Attachment, Attachment and Loss Vol. I*. Hogarth, London.
- Bowlby, J. (1980). *Loss: Sadness and Depression, Attachment and Loss Vol. III*. Hogarth, London.
- Brehm, S. S. (1985). *Intimate Relationships*. McGraw-Hill Publishing, New York.

- Brethelton, I. & Munholland, K. A. (1999). Internal working models in attachment relationships. A construct revisited. In: Cassidy, J., Shaver, P. R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London. 89-111.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17, 475-482.
- Brown, D. P. & Fromm, E. (1986). *Hypnotherapy and hypnoanalysis*. Lawrence Erlbaum Associates Publishers Hillsdale, New Jersey, London.
- Brown, P. (1993). Hypnosis and metaphor In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 291-308.
- Brunel, M. L. & Martiny, C. (2000). Role of Unintentional Gestural Imitations in the Empathic Process. In: Kappas, A. (ed.) *Proceedings of the XIth Conference of the International Society for Research on Emotions*, Quebec City, 216-220.
- Bryant, R. A., Hung L., Guastella A. J. & Mitchell P. B. (2011). Oxytocin as a moderator of hypnotizability. *Psychoneuroendocrinology*, doi:10.1016/j.psyneuen.2011.05.010.
- Buck, R. (1990). Rapport, emotional education and emotional competence. *Psychological Inquiry*, 1, 301-302.
- Burgoon, J. K. (1994). Nonverbal signals. In: Knapp, M. L. and Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi, 229-285.
- Burgoon, J. K., Stern, L. A. & Dillman, L. (1995). *Interpersonal Adaptation. Dyadic interaction patterns*. Cambridge University Press, Cambridge.
- Burleson, B. R. (1994). Comforting messages. In: Burleson, B. R., Albrecht, T. L., Sarason, I. G. (ed.) *Communication of social support*. Sage Publications, Thousand Oaks, London, 3-28.
- Burleson, B. R., Albrecht, T. L. & Sarason, I. G. (1994). *Communication of social support*. Sage publication, Thousand Oaks, London.
- Cairns, R. B. (1979). Toward guidelines for interactional research. In: Cairns, R. B. (ed.) *The analysis of social interactions. Method, issues, and illustrations*. Lawrence Erlbaum Associates, Hillsdale, 197-206.
- Cameron, N. M., Shahrokh, D., Del Corpo, A., Dhir, S. K., Szyf, M. & Champagne, F. A. (2008). Epigenetic programming of phenotypic variations in reproductive strategies in the rat through maternal care. *J Neuroendocrinology*, 20(6), 795-801.
- Cappella, J. N. (1990). On defining conversational coordination and rapport. *Psychological Inquiry*, 1(4), 303-305.
- Cappella, J. N. (1994). The management of conversational interaction in adults and infants. In: Knapp, M. L. and Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi, 380-411.
- Cappella, J. N. (1997). Behavioral and judged coordination in adult informal social interactions: Vocal and kinesic indicators. *Journal of Personality and Social Psychology*, 72(1), 119-131.
- Cardeña, E. (2000). Hypnosis in the treatment of trauma: A promising, but not fully supported, efficacious intervention. *The International Journal of Clinical and Experimental Hypnosis*, 48(2), 225-238.
- Carlson, R. (1971). Where is the person in personality research? *Psychological Bulletin*, 75(3), 203-219.

- Carolusson, S. (2011). Brain trauma and hypnotic communication, Tobias and family love. In: Varga, K. (ed.) *Beyond the words: Communication and Suggestion in Medical Practice*. New York: Nova Science Publishers Inc., 363-380.
- Cassidy, J. & Shaver, P. R. (1999). *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London.
- Champagne, F. A. (2008). Epigenetic Mechanisms and the Transgenerational Effects of Maternal Care. *Frontiers in Neuroendocrinology*, 29(3), 386-97.
- Champagne, F. A. & Curley, J. P. (2009). Epigenetic mechanisms mediating the long-term effects of maternal care on development. *Neuroscience and Biobehavioral Reviews*, 33(4), 593-600.
- Chartrand, T. L. & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology*, 76, 893-910.
- Cheek, D. B. (1975). Maladjustment patterns apparently related to imprinting at birth. *American Journal of Clinical Hypnosis*, 18, 75-82.
- Cheek, D. B. (1994). *Hypnosis: The application of ideomotor techniques*. Allyn & Bacon, Boston, 257.
- Coe, W. C. (1993). Expectations and hypnotherapy In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 73-93.
- Coe, W. C. & Sarbin, T. R. (1977). Hypnosis From the Standpoint of a Contextualist. *Annals of the New York Academy of Sciences*, 296, 2-13.
- Cole, M. (1996). Interactive minds. Life-span perspective: a cultural-historical approach to culture and cognitive development. In: Baltes, P. B., Staudinger, U. M. *Interactive minds. Life-span perspectives on the social foundation of cognition*. Cambridge University Press, Cambridge, 59-87.
- Condon, W. S. (1982). Cultural microrhythms. In: Davis, M. (ed.) *Interaction rhythms. Periodicity in communicative behavior*. Human Sciences Press, New York, 53-78.
- Condon, W. S. & Sander, L. W. (1974). Neonate movement is synchronized with adult speech: Interactional participation and language acquisition. *Science*, 183, 99-100.
- Coué, E. (1905). *L'Autosuggestion et son application pratique*. Les Editions des Champs-Élysées, Paris.
- Council, J. R. (1997). Context and consistency: The Canadian connection. *The International Journal of Clinical and Experimental Hypnosis*, 45(3), 204-211.
- Covino, N. A. (1997). The integration of clinical and experimental work. *The International Journal of Clinical and Experimental Hypnosis*, 45(2), 109-125.
- Covino, N. A. (2008). Medical illnesses, conditions and procedures. In: Nash, M. R. and Barnier, A. J. (ed.) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 611-624.
- Cox, R., E. & Bryant, R. A. (2008). Advances in hypnosis research: methods, designs and contributions of intrinsic and instrumental hypnosis In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 312-336.
- Crasilneck, H. B. (1990). Hypnotic techniques for smoking control and psychogenic impotence. *American Journal of Clinical Hypnosis*, 32(3), 147-153.

- Crawford, H. & Barabasz, A. F. (1993). Phobias and intense fears: facilitating their treatment with hypnosis In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis* American Psychological Association, Washington, DC, 311-337.
- Cronbach, L. J. (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16, 297-334.
- Curley, J. P., Champagne, F. A., Bateson, P. & Keverne, E. B. (2008). Transgenerational effects of impaired maternal care on behaviour of offspring and grandoffspring. *Animal Behaviour*, 75(4), 1551-1561.
- Cutura, C. E. & Suhr, J. A. (1994). Social support communication in the context of marriage In: Burleson, B. R., Albrecht, T. L., Sarason, I. G. (ed.) *Communication of social support*, Sage Publications, Thousand Oaks, London, 113-128.
- Csányi, V. (1999). *Az emberi természet. Humánológia*. Vince Kiadó, Budapest.
- Csűrös, D. (2011). *A Vizuális Imaginatív Szinkron vizsgálata éber szituációban*. Diplomamunka, ELTE Pedagógia és Pszichológia Kar, Témavezető: Varga Katalin.
- Damasio, A. (2005) Brain trust. *Nature*, 435, 571-572.
- David, D., Montgomery, G., Holdevici, I. (2003) Romanian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 51(1), 66-76.
- Davidson, R. J. (1998). Affective style and affective disorders: Perspectives from affective neuroscience. *Cognition and Emotion*, 12, 307-330.
- Davidson, R. J., Jackson, D. C. & Kalin, N. H. (2000). Emotion, plasticity, context, and regulation: Perspectives from affective neuroscience. *Psychological Bulletin*, 126, 890-906.
- Davis, M. (1979). The state of the art. Past and present trends in body movement research, In: Wolfgang, A. (ed.) *Nonverbal behavior: Applications and cultural implications*. Academic Press, New York, 51-66.
- Davis, M. (1982). *Interaction rhythms. Priodicity in communicative behavior*. Human Sciences Press, New York.
- Davis, M. H. (1983). Measuring individual differences in empathy: evidence for multidimensional approach *Journal of Personality and Social Psychology* 44, 113-126.
- De Benedittis, G. (2012). The Hypnotic Brain: Linking Neuroscience to Psychotherapy *Contemporary Hypnosis and integrative therapy*, 29(1), 103-115
- de Groot, H. P., Gwym, M. I. & Spanos, N. P. (1988). The Effects of Contextual Information and Gender on the Prediction of Hypnotic Susceptibility. *Journal of Personality and Social Psychology*, 54(6), 1049-1053.
- De Jaegher, H. & Di Paolo, E. A. (2008). Making sense in participation: An enactive approach to social cognition. In F. Morganti, A. Carassa, és G. Riva (eds.) *Enacting Intersubjectivity: A cognitive and social perspective to the study of interactions*, IOS Press: Amsterdam, 33-47.
- de Mendonca, J.S., Cossette, L., Strayer, F. F. & Gravel, F. (2011). Mother-child and father-child interactional synchrony in dyadic and triadic interactions. *Sex Roles*, 64, 132-142.
- De Pascalis, V. (1999). Psychological correlates of hypnosis and hypnotic susceptibility. *The International Journal of Clinical and Experimental Hypnosis*, 47(2), 117-143.
- De Pascalis, V., Russo, P. & Marucci, F. S. (2000). Italian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 48(1), 44-55.

- Demetrovics, Z., Varga, G., Szekely, A., Vereczkei, A., Csorba, J., Balazs, H., Hoffman, K., Sasvari-Szekely, M. & Barta, C. (2010). Association between Novelty Seeking of opiate-dependent patients and the catechol-O-methyltransferase Val158Met polymorphism. *Comprehensive Psychiatry*, 51(5), 510–515.
- DeVries, A. C., Glasper, E. R. & Detillion, C. E. (2003). Social modulation of stress responses. *Physiology & Behavior*, 79(3), 399–407.
- Diamond, M. J. (1980). The client-as-hypnotist: furthering hypnotherapeutic change. *The International Journal of Clinical and Experimental Hypnosis*, 28, 197-207.
- Diamond, M. J. (1984a). It takes two to tango: Some thoughts on the neglected importance of the hypnotist in an interactive hypnotherapeutic relationship, *American Journal of Clinical Hypnosis*, 27(1), 3-13.
- Diamond, M. J. (1984b). Book review on Sheehan, P. W., and McConkey, K. M. (1982) *Hypnosis and experience: The exploration of phenomena and process*. Hillsdale, New Jersey: Lawrence Erlbaum. *The International Journal of Clinical and Experimental Hypnosis*, 32, 388-390.
- Diamond, M. J. (1986). Hypnotically Augmented Psychotherapy: The Unique Contributions of the Hypnotically Trained Clinician. *American Journal of Clinical Hypnosis*, 28(4), 238-246.
- Diamond, M. J. (1987). The interactional basis of hypnotic experience: on the relational dimensions of hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 35, 95-115.
- Diamond, M. J. (2000). The long and winding road from concept to practice. *The International Journal of Clinical and Experimental Hypnosis*, 48(1), 70-85.
- Ditzen, B., Schaer, M., Gabriel, B., Bodenmann, G., Ehlert, U. & Heinrichs M. (2009). Intranasal Oxytocin Increases Positive Communication and Reduces Cortisol Levels During Couple Conflict. *Biological Psychiatry*, 65(9), 728–731.
- Duck, S. (1990). Where do all the kisses go? Rapport, positivity and relational-level analyses of interpersonal enmeshment. *Psychological Inquiry*, 1(4), 308-309.
- Eisen, M. R. (1993). Psychoanalytic and psychodynamic models of hypnoanalysis. In: Rhue, J. W. Lynn, S. J. and Kirsch, I. (ed.): *Handbook of clinical hypnosis*. American Psychological Association, 123-149.
- Eisen, M. R. & Fromm, E. (1983). The clinical use of self-hypnosis in hypnotherapy: Tapping the functions of imagery and adaptive regression. *The International Journal of Clinical and Experimental Hypnosis*, 31, 243-255.
- Ekman, P. (2003). *Emotions revealed. Understanding Faces and Feelings*. London: Phoenix.
- Ericsson, K. A. & Simon, H. A. (1980). Verbal reports as data. *Psychological Review*, 87, 215-251.
- Esch, T. & Stefano, G. B. (2005) The Neurobiology of Love. *Neuroendocrinology Letters*, 26(3), 175-92.
- Evans, F. J. (1971). Simulating Subjects: Who is Fooling Whom? *Paper presented at Symposium: Hypnosis, Experimental Methodology*. 79th Annual Convention, American Psychological Association, Washington, D. C., September 1971.
- Farah, M. J. (2000). The neural bases of mental imagery. In: Gazzaniga, M. S. (ed.) *The new cognitive neurosciences*. A Badford Book, MIT Press, Cambridge, 965-974.
- Farthing, G. W. (1992). *The psychology of consciousness*. Prentice Hall, New Jersey.

- Farthing, G. W., Brown, S. W. & Venturino M. (1983). Involuntariness of response on the Harvard Group Scale of Hypnotic Susceptibility. *The International Journal of Clinical and Experimental Hypnosis*, 23, 170-181.
- Feeney, J. A. (1999). Adult romantic attachment and couple relationships. In: Cassidy, J. and Shaver, P.R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London. 355-377.
- Feeney, J. & Noller, P. (1996). *Adult Attachment*. Sage Publications, London.
- Feldman, R. (2003). Infant-mother and infant-father synchrony: The coregulation of positive arousal. *Infant Mental Health Journal*, 24(1), 1-23.
- Feldman, R. (2006). From Biological Rhythms to Social Rhythms: Physiological Precursors of Mother-Infant Synchrony. *Developmental Psychology*, 42(1), 175-188.
- Feldman, R. (2007a). Parent-infant synchrony and the construction of shared timing; physiological precursors, developmental outcomes, and risk conditions. *Journal of Child Psychology and Psychiatry*, 48, 3(4), 329-354.
- Feldman, R. (2007b). Parent-infant synchrony biological foundations and developmental outcomes *Current Directions in Psychological Science*, 16(6), 340-345.
- Feldman, R. & Eidelman, A. I. (2004). Parent-Infant Synchrony and the Social-Emotional Development of Triplets. *Developmental Psychology*, 40(6), 1133-1147.
- Feldman, R., Gordon, I. & Zagoory-Sharon, O. (2010). The cross-generation transmission of oxytocin in humans. *Horm Behav*, 58, 669-676.
- Ferenczi, S. (1909/1965). Comments on hypnosis. Trans. Jones, E. In Shor, R. E., and Orne, M. T. (ed.) *The nature of hypnosis: Selected basic readings*. Holt, Rinehart and Winston, New York, 177-178
- Ferenczi, S. (1952). *First contributions to the theory and technique of psychoanalysis*. London: Hogarth.
- Ferenczi, S. (1982). *Lelki problémák a pszichoanalízis tükrében*. Magvető, Budapest.
- Fernald, R. D. & White, S. A. (2000). Social control of brains: from behavior to genes In: Gazzaniga, M. S. (ed.) *The new cognitive neurosciences*. A Bradford Book, MIT Press, Cambridge, 1193-1208.
- Field, P. B. (1965). An Inventory of Hypnotic Depth. *The International Journal of Clinical and Experimental Hypnosis*, 13, 238-249.
- Field, T. M. (1985). Attachment as psychobiological attunement: Being on the same wavelength. In: Reite, M., Field, T.M. (ed.) *The psychobiology of attachment and separation*. Academic Press, New York, 415-454.
- Field, T. M. (1992). Psychobiological attunement in close relationships, In: Featherman, D.L., Lerner, R. M., Perlmutter, M. (ed.) *Life-span development and behavior*. Hillsdale, Lawrence Erlbaum Associates, 1-25.
- Fish, E. W., Shahrokh, D., Bagot, R., Caldji, C., Bredy, T. & Szyf, M. (2004). Epigenetic programming of stress responses through variations in maternal care. *Annals of the New York Academy of Sciences*, 1036, 167-80.
- Fonagy, P. (1999). Psychoanalytic theory from the viewpoint of attachment theory and research. In: Cassidy, J. and Shaver, P.R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London, 595-624.
- Fonagy, P., Steele, M. & Steele, H. (1994). The theory and practice of resilience. *Journal of child psychology and psychiatry* 35, 231-257.

- Fourie, D. P. (1983). Width of the Hypnotic Relationship: An Interactional View of Hypnotic Susceptibility and Hypnotic Depth. *Australian Journal of Clinical and Experimental Hypnosis*, 11, 1-14.
- Fourie, D. P. & Lifschitz, S. (1989). Ecosystemic hypnosis: Ideas and therapeutic application. *British Journal of Experimental and Clinical Hypnosis*, 6(2), 99-107.
- Fraley, R. C., Waller, N. G. & Brennan, K. A. (2000). The Experiences in Close Relationships-Revised (ECR-R) Questionnaire. **(Hiba! A hiperhivatkozás érvénytelen.)**
- Frankel, F. H. (1987). Significant Developments in Medical Hypnosis During the Past 25 Years. *The International Journal of Clinical and Experimental Hypnosis*, 35, 231-247.
- Franklin, B. (1837). *Report of Benjamin Franklin and other commissioners charged by the King of France with the examination of the animal magnetism as practiced at Paris*. Philadelphia: Perkins. (Translation from the 1784 French of Franklin, Majault, LeRoy, Bailly, Dare, DeBorie, Guillotine, & Lavoisier).
- Frauman, D. C., Lynn, S. J. & Brentar, J. P. (1993). Prevention and therapeutic management of „negative effects” in hypnotherapy. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 95-120.
- Freud, S. (1962). *Two short accounts of psych-analysis (Five lectures on psych-analysis and the question of lay analysis)*. Penguin Books, Harmondsworth.
- Freud, S. (1963). *Introductory Lectures on Psychoanalysis*. Penguin Books, Harmondsworth.
- Freud, S. (1977). *Pszichoanalízis*. Kriterion, Budapest.
- Fromm, E. (1987). Significant Developments in Clinical Hypnosis During the Past 25 Years. *The International Journal of Clinical and Experimental Hypnosis*, 35, 215-230.
- Fromm, E., Brown, D. P., Hurt, S. W., Oberlander, J. Z., Boxer, A. M. & Pfeifer, G. (1981). The Phenomena and Characteristics of Self-Hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 29, 189-246.
- Fromm, E., Lombard, L., Skinner, S. H. & Kahn, S. (1987-88). The modes of the ego in self-hypnosis. *Imagination, Cognition and Personality*, 7(4), 335-349.
- Fuchs, T. & De Jaegher, H. (2009). Enactive intersubjectivity: Participatory sense-making and mutual incorporation. *Phenomenology and the Cognitive Sciences*, 8(4), 465-486.
- Gauld, A. (1992). *A history of hypnotism*. Cambridge University Press.
- Gazzaniga, M. S. (2000). *The new cognitive neurosciences*. Bradford Books, Cambridge.
- George, C., Kaplan, N. & Main, M. (1984). *Adult Attachment Interview Protocol*. Unpublished manuscript, University of California at Berkeley.
- Gergely, Gy. & Watson, J. S. (1996). The social biofeedback theory of parental affect-mirroring. *International Journal of Psycho-Analysis*, 77, 1181-1212.
- Gergely, Gy. & Watson, J. S. (1999). Early socio-emotional development: Contingency perception and the social-biofeedback model. In: Rochat, P. (ed.) *Early social cognition. Understanding others in the first month of life*. Lawrence Erlbaum Associates, London, 101-136.
- Gfeller, J. D. (1993). Enhancing hypnotizability and treatment responsiveness. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 235-249.
- Gfeller, J. D., Lynn, S. J. & Pribble, W. E. (1987). Enhancing Hypnotic Susceptibility: Interpersonal and rapport factors. *Journal of Personality and Social Psychology*, 52, 586-595.

- Giles, H. & Street, R. L. (1994). Communicator characteristics and behavior. In: Knapp, M. L. and Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi. 103-161.
- Gill, M. M. & Brenman, M. (1959). *Hypnosis and Related States*. New York: International Universities.
- Golanska, Z. (1992). Forms of prenatal interaction. In: Klimek, R. (ed.) *Pre- and perinatal psycho-medicine*. DWN Dream, Cracow.
- Goodwin, C. (1984). Notes on story structure and the organization of participation. In: Atkinson, J. M. and Heritage, J. *Structures of social action*. Cambridge University Press, Cambridge, 225-246.
- Gottschalk, L. A., Lolas, F. & Vinney, L. L. (1986). *Content analysis of verbal behavior. Significance in clinical medicine and psychiatry*. Springer-Verlag, Berlin-Heidelberg.
- Gösi-Greguss, A. C. (2002). Acoustic Analysis of the Hypnotist's Voice—a preliminary study. In B. Peter, W. Bongartz, D. Revenstorf, and W. Butollo (ed.) *Hypnosis International Monographs Number 6*. Munich: MEG Stiftung, 129-136.
- Gösi-Greguss, A. C., Bányai, É. I., Józsa, E., Suhai-Hodász, G. & Varga, K. (2004a). Voice Analysis of Hypnotists. *Grazer Linguistische Studien*, 62, 27-35.
- Gösi-Greguss, A. C., Bányai, É. I., Józsa, E., Suhai-Hodász, G. & Varga, K. (2004b). Hypnosis interaction from an evolutionary perspective: The role of the hypnotist's voice. *Paper presented at the 16th International Congress on Hypnosis and Hypnotherapy*, Singapore, October 17-22, 2004.
- Gösi-Greguss, A. C., Bányai, É. I. & Varga, K. (1996). Verbal and Paraverbal Communication in "Standard" Hypnoses. In *Eurohypnosis '96: 7th European Congress of Hypnosis, Budapest, August 17-23. Book of Abstracts*. 58.
- Gösi-Greguss, A. C., Bányai, É. I. & Varga, K. (2008). Voices in the hypnotic interaction: Are hypnotists and subjects perceived differently? Invited Paper presented at the 11th Congress of the European Society of Hypnosis (ESH) 17-21 September 2008. In: *Hypnose. Zeitschrift für Hypnose und Hypnotherapie. Book of abstracts 11th Congress of the European Society of Hypnosis (ESH) 17-21 September 2008, Band 3*, 30-31.
- Gösi-Greguss, A. C., Bányai, É. I. & Varga, K. (2009). Does the voice of the subject under hypnosis keep pace with the hypnotist, or is it a function of the hypnotic state? An acoustical analysis. *Paper presented at the XVIII International Congress "Hypnosis and Neuroscience" Clinical Implications of the New Mind-Body Paradigm*, September 22-26, 2009 - Rome, Italy.
- Gösi-Greguss, A. C., Bányai, É. I. & Varga, K. (2010). Does the voice of the subject under hypnosis keep pace with the hypnotist, or is it a function of hypnotic state? An acoustical analysis. *HypnosNytt*, 5(2), 4-14.
- Gösi-Greguss, A. C., Bányai, É. I. & Varga, K. (2011). Affective prosody of hypnotists and hypnotized subjects in view of their subjective experiences. *Symposium paper presented at the 12th European Congress of Hypnosis*, Istanbul, Turkey, August 16-20, 2011.
- Gösi-Greguss, A. C., Bányai, É. I. & Varga, K. (1997). Analysis of verbal communication in rapport formation. *Invited paper presented at the 14th International Congress of Hypnosis*, San Diego, California, June, 1997.
- Gösi-Greguss, A. C., Bányai, É. I., Varga, K. & Horváth, R. J. (1992). Slip of the Tongue - Slip of Hypnosis? Abstract. In *The Book of Abstracts of the 12th International Congress of Hypnosis*, Jerusalem, Israel, July 25-31.

- Gósiné Greguss A., Varga K., Bányai É. & Józsa E. (2011). Affective prosody of hypnotists and hypnotized subjects in view of their subjective experiences. *Paper presented at the 12th Congress of the European Society of Hypnosis (ESH) 16-20 August 2011.*
- Grammer, K., Kruck, K. B. & Magnusson, M. S. (1998). The Courtship Dance: Patterns of Nonverbal Synchronization in Opposite-Sex Encounters. *Journal of Nonverbal Behaviour, 22*(1), 3- 29.
- Gratier, M. (2003). Expressive timing and interactional synchrony between mothers and infants: cultural similarities, cultural differences, and the immigration experience. *Cognitive Development, 18*, 533-554.
- Gravitz, M. A. (1991). Early Theories of Hypnosis: A Clinical Perspective. In: Lynn, S. J., Rhue, J. W. (ed.): *Theories of Hypnosis: Current Models and Perspectives*. The Guilford Press, New York, London, 19-42.
- Gravitz, M. A. (2004). The Historical Role of Hypnosis in the Theoretical Origins of Transference. *The International Journal of Clinical and Experimental Hypnosis, 52*(2), 113-131.
- Greguss, A. Cs., Bányai, É., Mészáros I., Csókay, L. & Gerber, A. (1975). A hipnózis iránti érzékenység standard vizsgálata magyar nyelven. /The standardized investigation of hypnotic susceptibility in Hungarian language/ In Benedek L., Székely T. (szerk.) *A Magyar Pszichológiai Társaság IV. Tudományos Jubileumi Nagygyűlése /The Scientific Meeting of Hungarian Psychological Association/ 1975: november 17–18.* Budapest, Magyar Pszichológiai Társaság, 61–62.
- Grewen, K. M., Girdler, S. S., Amico, J. & Light, K. C. (2005). Effects of partner support on resting oxytocin, cortisol, norepinephrine, and blood pressure before and after warm partner contact. *Psychosomatic Medicine, 67*(4), 531–538.
- Gruzelier, J. H. (2006). Frontal functions, connectivity and neural efficiency underpinning hypnosis and hypnotic susceptibility. *Contemporary Hypnosis, 23*(1), 15-32.
- Gudjonsson, G. H. (1997). *The Gudjonsson Suggestibility Scales Manual*. Sussex: Psychology Press.
- Gwynn, M. I., Spanos, N. P., Gabora, N. J. & Jarrett, L. E. (1988). Long term and short term follow-up on the Harvard Group Scale of Hypnotic Susceptibility: Form A. *British Journal of Experimental and Clinical Hypnosis, 5*, 117–124.
- Haley, J. (1958). An interactional explanation of hypnosis. *American Journal Of Clinical Hypnosis, 1*, 41-57.
- Hammer, (1990). *Reaching the affect: style in the psychodynamic therapies*. Jason, Aronson Northvale, NJ
- Hammond, D. C. (1990). *Hypnotic suggestions and metaphors*. Norton & Company, New York, London.
- Hane, A. A., Feldstein, S. & Dernetz, V. H. (2003). The Relation Between Coordinated Interpersonal Timing and Maternal Sensitivity in Four-Month-Old Infants. *Journal of Psycholinguistic Research, 32*(5), 525-539.
- Harnish, J. D. & Dodge, K. A. (1995). Mother-child interaction quality as a partial mediator of the roles of maternal depressive symptomatology and socioeconomic status in the development of child behavior problems. *Child Development, 66*, 739-753.
- Harrist, A. W. & Waugh, R. M. (2002). Dyadic synchrony: Its structure and function in children's development. *Developmental Review, 22*, 555-592.

- Hatfield, E., Cacioppo, J. T. & Rapson, R. L. (1994). *Emotional contagion*, Cambridge University Press, Cambridge.
- Hazan, C. & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.
- Heath, C. (1984). Talk and reciprocity: sequential organization in speech and body movement. In: Atkinson, J. M. and Heritage, J. (1984) *Structures of social action*. Cambridge University Press, Cambridge, 247-265.
- Heim, C., Young, L. J., Newport, D. J., Mletzko, T., Miller, A. H. & Nemeroff, C. B. (2008). Lower CSF oxytocin concentrations in women with a history of childhood abuse. *Molecular Psychiatry*, 14, 954-958.
- Heller, K. & Rook, K. S. (1997). Distinguishing the theoretical function of social ties: Implications for support interventions. In: Duck, S. (ed.) *Handbook of personal relationships*. John Wiley & Sons, New York, 649-670.
- Hendrick, C. (1990). The nature of rapport. *Psychological Inquiry*, 1(4), 312-315.
- Hilgard, E. R. (1978-79). The Stanford Hypnotic Susceptibility Scales as related to other measures of hypnotic responsiveness. *American Journal of Clinical Hypnosis*, 21, 68-83.
- Hilgard, E. R. (1962). Impulsive Versus Realistic Thinking. *Psychological Bulletin*, 59(6), 477-488.
- Hilgard, E. R. (1968). *The Experience of Hypnosis*. Horcourt Brance and World Inc., New York.
- Hilgard, E. R. (1976). Neodissociation Theory of Multiple Cognitive Control Systems. In: Schwartz, G. E., Shapiro, D. (ed.) *Consciousness and Self Regulation*. Plenum Publishing Corporation, New York.
- Hilgard, E. R. (1977/79). *Divided Consciousness: Multiple Controls in Human Thought and Action*. John Wiley and Sons, New York.
- Hilgard, E. R. (1987). Research Advances in Hypnosis: Issues and Methods. *The International Journal of Clinical and Experimental Hypnosis*, 35, 248-264.
- Hilgard, E. R. (1977a). *Divided consciousness: Multiple controls in human thought and action*. John Wiley and Sons, New York.
- Hilgard, E. R. (1977b). The problem of divided consciousness: A neodissociation Interpretation. *Annals of the New York Academy of Sciences*, 296, 48-59.
- Hilgard, J. R. (1979). *Personality and hypnosis. A study of imaginative involvement*. Second edition. The University of Chicago Press, Chicago and London.
- Hollander, E., Novotny, S., Hanratty, M., Yaffe, R., DeCaria, C. M., Aronowitz, B. R. & Mosovich, S. (2003). Oxytocin infusion reduces repetitive behaviors in adults with autistic and Asperger's disorders. *Neuropsychopharmacology*, 28(1), 193-198.
- Holmes, J. (1996). *Attachment, intimacy, autonomy. Using attachment theory in adult psychotherapy*. Jason Aronson, Northvale.
- Holsti, O. R. (1969). *Content analysis for the social sciences and humanities*. Addison Wesley Publ.
- Horváth, R. J., Bányai, É. I., Varga, K. , Gósi-Greguss, A. C. & Vágó, P. (1988). Interactional approach to the understanding of hypnosis: Relational dimensions. *Paper presented at the 11th International Congress of Hypnosis and Psychosomatic Medicine*, The Hague, The Netherlands, August 1988.

- Howes, C. (1999). Attachment relationships in the context of multiple caregivers In: Cassidy, J. and Shaver, P. R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London, 671-687.
- Huber, D., Veinante, P. & Stoop, R. (2005). Vasopressin and Oxytocin Excite Distinct Neuronal Populations in the Central Amygdala. *Science*, 308(5719), 245-248.
- Insel, T. R. (1992). Oxytocin, a neuropeptide for affiliation: evidence from behavioral, receptor autoradiographic, and comparative studies. *Psychoneuroendocrinology*, 17, 3-35.
- Insel, T. R. & Winslow, J. T. (1998). Serotonin and Neuropeptides in Affiliative Behaviors. *Biological Psychiatry*, 44, 207-219.
- Isabella, R. A. & Belsky, J. (1991). Interactional synchrony and the origins of mother-infant attachment: A replication study. *Child Development*, 62, 373-384.
- Isabella, R. A., Belsky, J. & von Eye, A. (1989). Origins of infant-mother attachment: an examination of interactional synchrony during the infants' first year. *Developmental Psychology*, 25(1), 12-21.
- James, W. (1890). *Principles of psychology*, New York, Holt.
- Jasiukaitis, P., Nouriani, B., Hugdahl, K. & Spiegel, D. (1997). Relateralizing Hypnosis: Or, have we been Barking Up the Wrong Hemisphere? *International Journal of Clinical and Experimental Hypnosis*, 45(2), 158-177.
- Josselson, R. (1996). *The space between us*. Sage Publ., London.
- Józsa E., Varga K., Bányai, É. & Gósiné-Greguss, A. (2011b). Hipnotizőrök és alnyok szubjektív élményeinek mintázatai kísérleti helyzetben. *Előadás a Magyar Pszichológiai Társaság XX. Országos Tudományos Nagygyűlésén*, Budapest, 2011. május 25-27.
- Józsa, E. (2012a). A szeretkezés, mint módosult tudatállapot fenomenológiája. In: Varga K., Gósiné-Greguss A. (szerk.) (2012) *Tudatállapotok, Hipnózis, egymásra hangolódás*. L'Harmattan Kiadó, Budapest. 71-100.
- Józsa, E. (2012b). *Diádikus interakciós élménymintázatok hétköznapi és kísérleti helyzetekben*. PhD értekezés, ELTE PPK Doktori Iskola. Kézirat.
- Józsa, E. (2012c). A társas kapcsolatokra irányuló motivációs alapszükséglet. In: Bányai, É., Varga, K. (szerk.) *Affektív Pszichológia*, Medicina Kiadó, Budapest, 287-319.
- Józsa, E., Varga, K., Bányai, É. & Gósiné-Greguss, A. (2011a). Dyadic patterns of subjective experiences in experimental hypnosis session. *Paper presented at the 12th Congress of the European Society of Hypnosis (ESH)* 16-20 August 2011.
- Kahn, S. P., Fromm, E, Lombard, L. S. & Sossi, M. (1989). The relation of self-reports of hypnotic depth in self-hypnosis to hypnotizability and imagery production. *The International Journal of Clinical and Experimental Hypnosis*, 37, 290-304.
- Kallio, S. & Ihamuotila, M. J. (1999). Finnish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 47(3), 227-235.
- Katona, Gy. & Bányai, É. (2008). Önkontroll hipnózisban: mennyiben kényszerítő erejük a szuggesziók? *Magyar pszichológiai szemle*, 63(3), 471-497.
- Katonai E. R. & Veres-Székely A. (2012) Génváltoztatok szerepe a hipnózis szubjektív megélésében. In: Varga K., Gósiné-Greguss A. (ed) (2012) *Tudatállapotok, Hipnózis, egymásra hangolódás*. L'Harmattan Kiadó, Budapest. 319-338.

- Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. I., Levinger, G., McClintock, E., Peplau, L. A. & Peterson, D. R. (1983). *Close relationships*. Freeman and Company, New York, San Francisco.
- Kendon, A. (1979). Movement coordination in social interaction: Some examples described. In: Weitz, S. (ed.) *Nonverbal communication - Readings with commentary*. Oxford University Press, New York, 119-134.
- Kendrick, K. M. (2000). Oxytocin, motherhood and bonding. *Experimental Physiology*, 85(Suppl 1), 111S-124S.
- Kenny, D. A. & Kashy, D. A. (1991). Analyzing interdependence in dyads. In: Montgomery, B.M., Duck, S. (ed.) *Studying interpersonal interaction*. Guilford Press, New York, London, 275-285.
- Keown, L. J. & Woodward, L. J. (2002). Early Parent-Child Relations and Family Functioning of Preschool Boys with Pervasive Hyperactivity. *Journal of Abnormal Child Psychology*, 30(6), 541-553.
- Kihlstrom, J. F. (2012). Neuro-hypnotism: Prospects for hypnosis and neuroscience. *Cortex*, <http://dx.doi.org/10.1016/j.cortex.2012.05.016>
- Kihlstrom, J. (2008). The domain of hypnosis revisited. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 21-41.
- Kihlstrom, J. F. (1992). Hypnosis: A sesquicentennial essay. *The International Journal of Clinical and Experimental Hypnosis* 15(4), 301-314.
- Kihlstrom, J. F. (1997). Convergence in understanding hypnosis? Perhaps, but perhaps not quite so fast. *The International Journal of Clinical and Experimental Hypnosis*, 45(3), 324-332.
- Kihlstrom, J. F. (2003). The Fox, the Hedgehog, and Hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 51(2), 166-189.
- Kihlstrom, J. F. (1985). Hypnosis. *Annual Review of Psychology*, 36, 385-418.
- Kihlstrom, J. F., Register, P. A., Hoyt, I. P., Albright, J. S., Grigoriou, E. M., Heindel, W. C. & Morrison, C. R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. *The International Journal of Clinical and Experimental Hypnosis*, 37(3), 249-263.
- Killeen, P. R. & Nash, M. R. (2003). The Four Causes of Hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 51(3), 195-231.
- Kimura, M. & Daibo, I. (2006). Interactional Synchrony in Conversations about Emotional Episodes: A Measurement by „the Between-Participants Pseudosynchrony Experimental Paradigm”. *Nonverbal Behav*, 30, 115-126.
- Kinnunen, T., Zamansky, H. S. & Nordstrom, B. L. (2001). Is the hypnotized subject complying? *The International Journal of Clinical and Experimental Hypnosis*, 49(2), 83-94.
- Kirsch, I. (1993). Cognitive-behavioral hypnotherapy. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 151-171.
- Kirsch, I. (1996). Hypnosis in psychotherapy: Efficacy and mechanisms. *Contemporary Hypnosis*, 23, 109-114.
- Kirsch, I. (1997). Suggestibility or hypnosis: What do our scales really measure? *The International Journal of Clinical and Experimental Hypnosis*, 45(3), 212-225.

- Kirsch, I., Council, J. R. & Wickless, C. (1990). Subjective scoring for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 38(2), 112–124.
- Kirsch, I. & Lynn, S. J. (1995). Altered state of hypnosis: Changes in the theoretical landscape. *American Psychologist*, 50, 846-858.
- Klaus, M. H., Kennell, J. H. & Klaus, P. H. (2002). *The Doula Book*. Da Capo Press, Cambridge.
- Klein, W. (1996). Esencially social: on the origin of linguistic knowledge in the individual. In: Baltes, P. B., Staudinger, U. M. *Interactive minds. Life-span perspectives on the social foundation of cognition*. Cambridge University Press, Cambridge, 88-108.
- Kogon, M.M., Jasiukaitis, P., Berardi, A., Gupta, M., Kosslyn, S.M. & Spiegel, D. (1998). Imagery and hypnotizability revisited. *The International Journal of Clinical and Experimental Hypnosis*, 46(4), 363-370.
- Kohen, D. P. & Olness, K. (1993). Hypnotherapy with children. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 357-381.
- Korman, M. (1982). Rhythmic communication in the mother-infant dyad. In: Davis, M. (ed.) *Interaction rhythms. Periodicity in communicative behavior*. Human Sciences Press, New York, 79-100.
- Kosfeld, M., Heinrichs, M., Zak, P. J., Fischbacher, U. & Fehr, E. (2005). Oxytocin increases trust in humans. *Nature*, 435, 673-676.
- Kosslyn, S. M., Thompson, W. L., Costantini-Ferrando, M. F., Alpert, N. M. & Spiegel, D. (2000). Hypnotic visual illusion alters color processing in the brain. *American Journal of Psychiatry*, 157, 1279-1284.
- Kraemer, G. W. (1992). A psychobiological theory of attachment. *Behavioural and Brain Sciences*, 15, 493-511.
- Krippner, S. (1993). Cross-cultural perspectives on hypnotic-like procedures used by native healing practitioners. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 691-717.
- Kulcsár, Zs., Rózsa, S., Kókonyei, Gy. (szerk.) (2004). *Megmagyarázhatatlan testi tünetek. Szomatizáció és funkcionális stresszbetegségek I-II.* (szöveggyűjtemény). ELTE Eötvös Kiadó Kft., Budapest.
- Kumar, V. K. & Pekala, R. J. (1988). Hypnotizability, absorption and individual differences in phenomenological experiences. *The International Journal of Clinical and Experimental Hypnosis* 36(2), 80-88.
- Kumar, V. K. & Pekala, R. J. (1989). Variations in phenomenological experience as a function of hypnosis and hypnotic susceptibility: A replication. *British Journal of Experimental and Clinical Hypnosis*, 6, 17-22.
- Kumar, V. K., Pekala, R. J. & Cummings, J. (1996). Trait Factors, State Effects and Hypnotizability. *The International Journal of Clinical and Experimental Hypnosis*, 44, 232-249.
- Kumar, V. K., Pekala, R. J. & McCloskey, M. (1999). Phenomenological State Effects During Hypnosis: A Cross-Validation of Findings. *Contemporary Hypnosis*, 16(1), 9-22.
- Kuttner, L. (1988). Favorite stories: a hypnotic pain-reduction technique for children in acute pain. *American Journal of Clinical Hypnosis*, 30(4), 289–295.

- Lakin, J. L., Jefferis, V. E., Cheng, C. M. & Chartrand, T. L. (2003). The chameleon effect as social glue: evidence for the evolutionary significance of nonconscious mimicry. *Journal of Nonverbal Behavior*, 27(3), 145-162.
- Lankton, S. (2008). An Ericksonian approach to clinical hypnosis In: Nash, M. R. and Barnier, A. J. *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 467-485.
- Laplanche, J. & Pontalis, J. (1994). *A pszichoanalízis szótára*. Akadémiai kiadó, Budapest.
- Laurence, J-R. (1997). Hypnotic theorising: Spring cleaning is long overdue. *The International Journal of Clinical and Experimental Hypnosis*, 45(3), 280-290.
- Laurence, J-R., Beaulieu-Prévost, D. & du Chéné, T. (2008). Measuring and understanding individual differences in hypnotizability In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 225-253.
- Lazar, B. S. & Dempster, C. R. (1984). Operator Variables in Successful Hypnotherapy. *The International Journal of Clinical and Experimental Hypnosis*, 32(1), 28-40.
- Lee, H. J., Macbeth, A. H., Pagani, J. H. & Young, W. S. 3rd. (2009). Oxytocin: the great facilitator of life. *Progress in Neurobiology*, 88(2), 127-51.
- Lefánti, D. (2011). *A dúla hatása a szülés folyamatára*. Szakdolgozat, ELTE PPK, Témavezető: Varga K. Kézirat, Budapest.
- LeFrance, M. (1982). Posture mirroring and rapport. In: Davis, M. (ed.) *Interaction rhythms. Periodicity in communicative behavior*. Human Sciences Press, New York, 279-297.
- Leng, G. & Ludwig, M. (2008). Neurotransmitters and peptides: whispered secrets and public announcements. *The Journal of Physiology*, 568, 5625-5632.
- Levine, A., Zagoory-Sharon, O., Feldman, R. & Weller, A. (2007). Oxytocin during pregnancy and early postpartum: individual patterns and maternal-fetal attachment. *Peptides*, 28(6), 1162-1169.
- Levitt, E. E. (1993). Hypnosis in the treatment of obesity. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC 533-553.
- Levitt, E. E. & Baker, E. L. (1983). The Hypnotic Relationship - Another Look at Coercion, Compliance, and Resistance: A brief communication. *The International Journal of Clinical and Experimental Hypnosis*, 31, 125-131.
- Lichtenberg P., Bachner-Melman R., Ebstein R. P. & Crawford H. J. (2004). Hypnotic susceptibility: Multidimensional relationships with Cloninger's Tridimensional Personality Questionnaire, COMT polymorphisms, absorption, and attentional characteristics. *The International Journal of Clinical and Experimental Hypnosis*, 52, 47-72.
- Lichtenberg P., Bachner-Melman R., Gritsenko I. & Ebstein R. P. (2000). Exploratory association study between catechol-O-methyltransferase (COMT) high/low enzyme activity polymorphism and hypnotizability. *American Journal of Medical Genetics*, 96, 771-774.
- Lichtenberg, P. (2008). Israeli norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 56(4), 384-393.
- Lindsey, E. W., Colwell, M. J., Frabutt, J. M., Chambers, J. C. & MacKinnon-Lewis, C. (2008). Mother-child Dyadic Synchrony in European American and African American

- Families during Early Adolescence. Relations with Self-Esteem and Prosocial Behavior. *Merrill-Palmer Quarterly*, 54(3), 289-315.
- Lindsey, E. W., Cromeens, P. R., Colwell, M. J. & Caldera, Y. M. (2009). The Structure of Parent–Child Dyadic Synchrony in Toddlerhood and Children’s Communication Competence and Self-control. *Social Development*, 18(2), 375-396.
- Lombard, L. S., Kahn, S. P. & Fromm, E. (1990). The role of imagery in self-hypnosis: its relationship to personality characteristics and gender. *The International Journal of Clinical and Experimental Hypnosis*, 38, 25-38.
- Ludwig M. & Leng G. (2006). Dendritic peptide release and peptide-dependent behaviours. *Nat Rev Neurosci* 7, 126-136.
- Ludwig, A. M. (1966). Altered states of consciousness. *Archives of General Psychiatry*, 15, 225-234.
- Ludwig, A. M. (1966). Altered states of consciousness. In: Tart, C. T. (ed.) *Altered States of Consciousness*. New York, Anchor Book Doubleday and Company Inc. 9-22.
- Ludwig, A. M. (1983). The psychobiological function of dissociation. *American Journal of Clinical Hypnosis*, 26(2), 93-99.
- Ludwig-Körner, C. (1999). Effects of Severely Disturbed Parents on Early Parent-Infant Interaction. *International Forum of Psychoanalysis*, 8(1), 25-31.
- Lundy, B. L. (2002). Paternal socio-psychological factors and infant attachment: The mediating role of synchrony in father-infant interactions. *Infant Behaviour and Development*, 25, 221-236.
- Lundy, B. L. (2003). Father and mother-infant face-to-face interactions: Differences in mind-related comments and infant attachment? *Infant Behaviour and Development*, 26, 200-212.
- Lynn, S. J. (1997). Automaticity and hypnosis: A sociocognitive Account. *The International Journal of Clinical and Experimental Hypnosis*, 45(3), 239-250.
- Lynn, S. J. Kirsch I. & Rhue J. W. (1996). *Casebook of Clinical Hypnosis*. American Psychological Association, Washington DC.
- Lynn, S. J., Kirsch, I., Barabasz, A., Cardeña, E. & Patterson, D. (2000). Hypnosis as an empirically supported clinical intervention: The state of the evidence and a look to the future. *The International Journal of Clinical and Experimental Hypnosis*, 48(2), 239-259.
- Lynn, S. J., Nash, M. R., Rhue, J. W., Carlson, V., Sweeney, C., Frauman, D. & Givens, D. (1985). Non-volition and hypnosis. Reals vs. simulators: Experiential and behavioral differences in response to conflicting suggestions during hypnosis. In Waxman, D., Misra, P. C., Gibson, M., Barker, M. A. (ed.) *Modern trends in hypnosis*. New York, London: Plenum Press.
- Lynn, S. J. & Rhue, J. W. (1988). Fantasy proneness: Hypnosis, developmental antecedents and psychopathology. *American Psychologist*, 43, 35-44.
- Lynn, S. J. & Rhue, J. W. (1991). *Theories of hypnosis. Current models and perspectives*. Guilford Press, New York, London.
- Lynn, S. J. & Rhue, J. W. (1991a). An integrative model of hypnosis. In: Lynn, S. J., Rhue, J. W. (ed.) *Theories of Hypnosis: Current Models and Perspectives*. The Guilford Press, New York, London, 397-438.
- Lynn, S. J. & Rhue, J. W. (1991b). Hypnotic theories: Themes, variations, and research direction. In: Lynn, S. J., Rhue, J. W. (ed.) *Theories of hypnosis: Current models and perspectives*. Guilford Press, New York, London, 601-626.

- Lynn, S. J., Weekes, J. R., Neufeld, V., Zivney, O., Brentar, J. & Weiss, F. (1991). Interpersonal climate and hypnotizability level: effects on hypnotic performance, rapport, and archaic involvement. *Journal of Personality and Social Psychology*, 60(5), 739-743.
- Macdonald, K. & Macdonald, T. M. (2010). The peptide that binds: a systematic review of oxytocin and its prosocial effects in humans. *Harvard Review Psychiatry* 18(1), 1-21.
- Magai, C. (1999). Affect, imagery and attachment In: Cassidy, J. and Shaver, P.R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London, 787-802.
- Maitz, E. A. & Pekala, R. J. (1991). Phenomenological quantification of an out-of-the body experience with a near death event. *Omega*, 22 (3), 199-214.
- Marks, D. F. (1973). Visual imagery differences in the recall of pictures. *British Journal of Psychology*, 64, 17-24.
- Matheson, G., Shue, K.L. & Bart, C. (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotisability. *American Journal of Clinical Hypnosis*, 32, 17-26.
- Matthews, W. J., Benett, H., Bean, W. & Gallagher, H. (1985). Indirect versus direct hypnotic suggestions - an initial investigation. *The International Journal of Clinical and Experimental Hypnosis*, 33(3), 219-223.
- Matthews, W. J. & Isenberg G. L. (1995). A comparison of the hypnotic experience between signing deaf and hearing participants. *The International Journal of Clinical and Experimental Hypnosis*, 43(4), 375-385.
- Matthews, W. J., Lankton, S. & Lankton, C. (1993). An Ericksonian model of hypnotherapy In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 187-214.
- Matthews, W. J. & Moser, D. J. (1988). Direct and indirect hypnotic suggestion in a laboratory setting. *British Journal of Experimental and Clinical Hypnosis*, 5, 63-71.
- Maurer, R. L., Sr., Kumar, V. K., Woodside, L. & Pekala, R. J. (1997). Phenomenological experience in response to drumming and hypnotizability. *American Journal of Clinical Hypnosis*, 40, 130-144.
- McConkey, K. M., Szeps, A. & Barnier, A. J. (2001). Indexing the experience of sex change in hypnosis and imagination. *The International Journal of Clinical and Experimental Hypnosis*, 49(2), 123-138.
- McConkey, K. M., Wende, V. & Barnier, A. J. (1999). Measuring change in the subjective experience of hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 47(3), 23-39.
- McNeill, D. (1992). *Hand and mind. What gestures reveal about thought*. The University of Chicago Press, Chicago and London.
- Meadow, M. J. (1979). Spiritual and transpersonal aspects of altered states of consciousness: a symposium report. *The Journal of Transpersonal Psychology*, 11, 1.
- Meinschmidt, G. & Heim, C. (2007). Sensitivity to intranasal oxytocin in adult men with early parental separation. *Biological Psychiatry*, 61(9), 1109-11.
- Meltzoff, A. N. & Moore, M. K. (1977). Imitation of facial and manual gestures by human neonates, *Science*, 198, 75-78.
- Mende, M. (1998). Hypnotherapeutic responses to transference in the face of therapeutic change. *Hypnos*, 25(3), 134-144.

- Mérő, L. & Varga, K. (1993). Trance logic without trance. In: Koch, P.(ed.) *Third Conference on Artificial Intelligence*. Published by John von Neumann Society for Computer Sciences, 39-48.
- Mérő, L. & Varga, K. (2000). Transzlogika transz nélkül. In: Pléh Cs., Kamps Gy., Csányi V. (szerk.) *A megismeréskutatás útjai*. Pszichológiai Műhely 12., Akadémiai Kiadó, Budapest, 178-192.
- Milling, L. S. & Costantino, C. A. (2000). Clinical hypnosis with children: First steps toward empirical support. *The International Journal of Clinical and Experimental Hypnosis*, 48(2), 113-137.
- Mitchell, G. P. & Lundy, R. M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. *The International Journal of Clinical and Experimental Hypnosis*, 34(2), 98-109.
- Montgomery, G. H., Duhamel, K. N. & Redd, W. H. (2000). A meta-analysis of hypnotically induced analgesia: How effective is hypnosis? *The International Journal of Clinical and Experimental Hypnosis*, 48(2), 138-153.
- Morgan, A. H. (1973). The heritability of hypnotic susceptibility in twins. *Journal of Abnormal Psychology*, 82, 55-61.
- Morgan, A. H., Hilgard, E. R. & Davert, E. C. (1970). The Heritability of Hypnotic Susceptibility of Twins: A Preliminary Report. *Behavioral Genetics*, 1(3/4), 213-223.
- Morgan, A. H. & Hilgard, J. R. (1975). Stanford Hypnotic Clinical Scale. In: Hilgard, E. R., Hilgard, J. R. (ed.) *Hypnosis in the Relief of Pain*. Los Altos, CA: William Kaufmann, Appendix A, 209-221.
- Morgan, D. W. (1987). An initial inquiry into the altered state experiences associated with terpsichoretrancetherapy. *International Journal of Psychosomatics*, 34, 26-28.
- Murray, L. & Trevarthen, C. (1985). Emotional regulation of interactions between two-month-olds and their mothers. In T. M. Field and N. A. Fox (ed.) *Social perception in infants* (177-197). Norwood, NJ: Ablex.
- Murray-Jobis, J. (1993). The borderline patient and the psychotic patient. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 425-451.
- Nadon, R. (1997). What this field needs is a good nomological network. *IJECH*, 45(3), 314-323
- Nagasawa, M., Kikusui, T., Onaka, T. & Ohta M. (2009). Dog's gaze at its owner increases owner's urinary oxytocin during social interaction. *Hormones and Behavior*, 55(3), 434-41.
- Nash, M. R. (1991). Hypnosis as a special case of psychological regression. In: Lynn, S. J., Rhue, J. W. (ed.) *Theories of Hypnosis: Current Models and Perspectives*. The Guilford Press, New York, London, 171-196.
- Nash, M. R. (2008a). A psychoanalytic theory of hypnosis: a clinically informed approach In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 202-222.
- Nash, M. R. (2008b). Foundations of clinical hypnosis. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 487-502.
- Nash, M. R. & Barnier, A. J. (2008). *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York.

- Nash, M. R. & Spinler, D. (1989). Hypnosis and transference: A measure of archaic involvement. *The International Journal of Clinical and Experimental Hypnosis*, 37, 129-143.
- Natsoulas, T. (1970). Concerning introspective "knowledge". *Psychological Bulletin*, 73, 89-111.
- Nemiah, J. C. & Sifneos, P. E. (1970). Psychosomatic illness: A problem in communication. *Psychotherapy and Psychosomatics*, 18, 154-160.
- Niederhoffer, K. G. & Pennebaker, J. W. (2002). Linguistic style matching in social interaction. *Journal of Language and Social Psychology*, 21, 337-360.
- Nisbett, R. E. & Wilson, T. D. (1977). Telling more than we can know: verbal reports on mental processes. *Psychological Review*, 84, 231-259.
- Norcross, J. C. (2010). The therapeutic relationship. In: Duncan, B. L., Miller, Scott D., Wampold, B. E., Hubble, M. A. (ed.) (2010) *The heart and soul of change: Delivering what works in therapy (2nd ed.)* (pp. 113-141). Washington, DC, US: American Psychological Association, xxix, 455 pp. doi: 10.1037/12075-004.
- Norcross, J. C. & Wampold, B. E. (2011). Evidence-based therapy relationships: Research conclusions and clinical practices. *Psychotherapy*, 48(1), 98-102.
- Nordenstrom, B. K., Council, J. R. & Meier, B. P. (2002). The "big five" and hypnotic suggestibility. *The International Journal of Clinical and Experimental Hypnosis*, 50(3), 276-281.
- Oakley, D. A. (2008). Hypnosis, trance and suggestion: evidence from neuroimaging. In: Nash, M. R. and Barnier, A. J. (2008) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 365-392.
- Olness, K. & Kohen, D. (1996). *Hypnosis and hypnotherapy with children*. Guilford Press, New York.
- Orne, M. T. (1959). The nature of hypnosis: Artifact and essence. *Journal of Abnormal and Social Psychology*, 58, 277-299.
- Orne, M. T. (1962). On the social psychology of the psychological experiment: with particular reference to demand characteristics and their implications. *American Psychologist*, 17(11).
- Orne, M. T. (1965). Undesirable effects of hypnosis: The determinants and management. *The International Journal of Clinical and Experimental Hypnosis*, 13, 226-237.
- Orne, M. T. (1969). Demand characteristics and the concept of quasi-controls. In: Rosenthal & Rosnow (ed.) *Artifact in Behavioral Research*. Academic Press Inc., New York, 143-179.
- Orne, M. T. (1970). Hypnosis, motivation and the ecological validity of the psychological experiment. In: Arnold, W. J., Page, M. M. (ed.) *Nebraska Symposium on motivation*. Lincoln, University of Nebraska Press, 187-265.
- Orne, M. T. (1971). The Simulation of Hypnosis: Why, How, and What it Means. *The International Journal of Clinical and Experimental Hypnosis*, 19(4), 183-210.
- Orne, M. T. (1972). On the simulating subject as a quasi-control group in hypnosis research: What, why and how. In: Fromm, E., Shor, R. E. (ed.) *Hypnosis: research developments and perspectives*, Aldine-Atheron, Chicago, 399-443.
- Orne, M. T. (1973). Communication by the total experimental situation: Why it is important, how it is evaluated, and its significance for the ecological validity of findings. In: Pliner,

- P., Krames, L., Alloway, T. (ed.) *Communication and Affect*. Academic Press, New York, 157-191.
- Orne, M. T. (1977). The construct of hypnosis: implications of the definition for research and practice. *Annals of the New York Academy of Sciences*, 296, 14-33.
- Oxman, T. E., Rosenberg, S. D., Schnurr, P. P., Tucker, G. J. & Gala, G. (1988). The language of altered states. *The Journal of Nervous and Mental Disease*, 76, 401-408.
- Parks, M. R. (1994). Communicative competence and interpersonal control. In: Knapp, M. L. and Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi. 589-618.
- Patterson, D. R. , Jensen, M. P., Wiechman, S. A. & Sharar, S. R. (2010). Virtual Reality Hypnosis for Pain Associated With Recovery From Physical Trauma. *The International Journal of Clinical and Experimental Hypnosis*, 58(3), 288-300.
- Patterson, D. R. & Jensen, M. (2003). Hypnosis and clinical pain. *Psychological Bulletin*, 129, 495-521.
- Patterson, M. L. (1976). An arousal model of interpersonal intimacy. *Psychological Review*, 89, 231-249.
- Peebles, M. J. (2008). Trauma-related disorders and dissociation. In: Nash, M. R. and Barnier, A. J. (ed.) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 647-679.
- Peebles-Kleiger, M. J. (2001). Contemporary psychoanalysis and hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 49(2), 146-165.
- Pekala, R. J. (1980). *An Empirical-Phenomenological Approach for Mapping Consciousness and Its Various "States."* Unpublished doctoral dissertation, Michigan State University, University Microfilm No. 82-02, 489.
- Pekala, R. J. (1982). *The Phenomenology of Consciousness Inventory (PCI)*. Thorndale, P. A.: Psychophenomenological Concepts.
- Pekala, R. J. (1988). *Phenomenology of consciousness inventory: short form (PCI:SF)*. (kézirat) Unpublished Psychological Test, Coastville Medical Center, Coastville PA.
- Pekala, R. J. (1990). *Short form hypnotic induction procedure ("body scan" and "mind-calm" hypnosis procedure)* (kézirat).
- Pekala, R. J. (1991a). *Quantifying Consciousness: An Empirical Approach*. Plenum, New York.
- Pekala, R. J. (1991b). *The Phenomenology of Consciousness Inventory*. Thorndale, PA: West Chester, PA: Mid-Atlantic Educational Institute.
- Pekala, R. J. , Maurer, R., Kumar, V. K., Elliott-Carter, N. & Mullen, K. (2010). Trance State Effects and Imagery Vividness Before and During a Hypnotic Assessment: A Preliminary Study. *The International Journal of Clinical and Experimental Hypnosis*, 58(4), 383-416.
- Pekala, R. J. & Ersek, B. (1992-93). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. *Imagination, Cognition, and Personality*, 12, 284-293.
- Pekala, R. J. & Forbes, E. J. (1988). Hypnoidal effects associated with several stress management techniques. *Australian Journal of Clinical and Experimental Hypnosis*, 16, 121-132.
- Pekala, R. J. & Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. *American Journal of Clinical Hypnosis*, 27, 114-121.

- Pekala, R. J. & Kumar, V. K. (1987). Predicting hypnotic susceptibility via a self-report instrument: a replication. *Australian Journal of Clinical and Experimental Hypnosis*, 30, 57-66.
- Pekala, R. J. & Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. *Australian Journal of Clinical and Experimental Hypnosis*, 17, 1-20.
- Pekala, R. J. & Kumar, V. K. (2000). Operationalizing "trance." I. Rationale and research using a psychophenomenological approach. *American Journal of Clinical Hypnosis*, 43, 107-135.
- Pekala, R. J., Kumar, V. K., Maurer, R., Elliott-Carter, N., Moon, E. & Mullen, K. (2010a). Suggestibility, Expectancy, Trance State Effects, and Hypnotic Depth: I. Implications for Understanding Hypnotism. *American Journal of Clinical Hypnosis*, 52, 275-290.
- Pekala, R. J., Kumar, V. K., Maurer, R., Elliott-Carter, N., Moon, E. & Mullen, K. (2010b). Suggestibility, Expectancy, Trance State Effects, and Hypnotic Depth: II. Assessment via the PCI-HAP. *American Journal of Clinical Hypnosis*, 52, 291-318.
- Pekala, R. J., Steinberg, J. & Kumar, V. K. (1986). Measurement of phenomenological experience: Phenomenology of Consciousness Inventory. *Perceptual and Motor Skills*, 63, 983-989.
- Pekala, R. J., Wenger, C. F. & Levine, R. L. (1985). Individual differences in phenomenological experience: states of absorption. *Journal of Personality and Social Psychology*, 48, 125-132.
- Pelech, W. (2002). Charting the Interpersonal Underworld: The Application of Cluster Analysis to the Study of Interpersonal Coordination in Small Groups. *New Scholarship in the Human Services*, University of Calgary Press.
- Perris, C., Jacobsson, L., Lindström, H., Von Khorrning, L. & Perris, H. (1980). Development of a new inventory for assessing memories of parental rearing behaviour. *Acta Psychiatrica Scandinavica*, 61, 265-274.
- Perry, C. (2004). Can Anecdotes add to an Understanding of Hypnosis? *The International Journal of Clinical and Experimental Hypnosis*, 52, 3, 218-231.
- Perry, C. & Laurence, J. R. (1980). Hypnotic depth and hypnotic susceptibility: a replicated finding. *The International Journal of Clinical and Experimental Hypnosis*, 38, 272-280.
- Perry, C. & McConkey, K. M. (2002). The franklin commission report in light of past and present understandings of hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 50(4), 387-396.
- Perry, C.W. & Sheehan, P.W. (1978). Aptitude for trance and situational effects of varying the interpersonal nature of the hypnosis setting. *American Journal of Clinical Hypnosis*, 20(4), 256-262.
- Petrovic, P., Kalisch, R., Singer, T. & Dolan, R. J. (2008). Oxytocin attenuates affective evaluations of conditioned faces and amygdala activity. *The Journal of Neuroscience*, 28(26), 6607-6615.
- Piccione, C., Hilgard, E. R. & Zimbardo, P. G. (1989). On the stability of measured hypnotizability over a 25 year period. *Journal of Personality and Social Psychology Review*, 57, 289-295.
- Pinnell, C. M., Lynn, S. J. & Pinnell, J. P. (1998). Primary process, hypnotic dreams, and the hidden observer: Hypnosis versus alert imagining. *The International Journal of Clinical and Experimental Hypnosis*, 46(4), 351-362.

- Polan, H. J. & Hofer, M. A. (1999). Psychobiological origin of infant attachment and separation responses. In: Cassidy, J. and Shaver, P. R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London. 162-180.
- Pope, K. S. & Singer, J. L. (1978). *The stream of consciousness scientific investigation into the flow of human experience*. John Wiley & Sons, New York.
- Porges, S. W. (2001). The polyvagal theory: phylogenetic substrates of a social nervous system. *International Journal of Psychophysiology*, 427, 123-146.
- Porges, S. W. (2003). Social Engagement and Attachment: A Phylogenetic Perspective. *Annals of the New York Academy of Sciences*, 1008, 31-47.
- Porges, S. W. (2007). The polyvagal perspective. *Biological Psychology*, 74(2), 116-143.
- Pyun, Y. D. & Kim, Y. J. (2009). Norms for the Korean version of the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 57(1), 117-126.
- Rainville, P. & Price, D. D. (2003). Hypnosis Phenomenology and the Neurobiology of Consciousness. *The International Journal of Clinical and Experimental Hypnosis*, 51(2), 105-129.
- Rákóczi, B. (2010). *A magasabb szintű humán funkciók téri szimmetriájának a megváltozása jobb-és bal agyféltekei sérült betegeknél*. Szakdolgozat, Budapest : ELTE PPK Pszichológiai Intézet.
- Ray, W. J. (1997). EEG concomitants of hypnotic susceptibility. *The International Journal of Clinical and Experimental Hypnosis*, 45(3), 301-313.
- Ray, W. J. & Pascalis, V. (2003). Temporal Aspects of Hypnotic Processes. *The International Journal of Clinical and Experimental Hypnosis*, 51(2), 147-165.
- Ray, W. J. & Tucker, D. M. (2003). Evolutionary Approaches to Understanding the Hypnotic Experience. *The International Journal of Clinical and Experimental Hypnosis*, 51(3), 256-281.
- Raz, A., Fan, J. & Posner, M. I. (2006). Neuroimaging and genetic associations of attentional and hypnotic processes. *Journal of Physiology - Paris*, 99, 483-491.
- Raz, A. (2005). Attention and hypnosis: Neural substrates and genetic associations of two converging processes. *The International Journal of Clinical and Experimental Hypnosis*, 53, 237-258.
- Register, P. A. & Kihlstrom, J. F. (1986). Finding the hypnotic virtuoso. *The International Journal of Clinical and Experimental Hypnosis*, 34(2), 84-97.
- Repka, R. J. & Nash, M. R. (1995). The hypnotic responsivity of the deaf: The development of the university of Tennessee hypnotic susceptibility scale for the deaf. *The International Journal of Clinical and Experimental Hypnosis*, 43(3), 316-331.
- Rhue, J. W. & Lynn, S. J. (1993). Hypnosis and storytelling in the treatment of sexual abuse: Strategies and procedures. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 445-478.
- Rhue, J. W., Lynn, S. J. & Kirsch, I. (1993). *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC.
- Richardson, M. J., Marsh, K. L. & Schmidt, R. C. (2005). Effects of Visual and Verbal Interaction on Unintentional Interpersonal Coordination. *Journal of Experimental Psychology: Human Perception and Performance*, 31(1), 62-79.
- Robles, T. (1998). *Concierto para cuatro cerebros*. Alom Editores, México.

- Robles, T. (2000). *Hipnosis clásica e hipnosis ericksoniana*. Curso en el Centro Ericksoniano de México.
- Rogers, C. R. (1979). *The foundation of the person-centered approach*. Manuscript.
- Rønnestad, M. H. (1989). Hypnosis and autonomy: a moderator analysis. *International of Clinical and Experimental Hypnosis*, 37, 154-168.
- Rosén, G., Willoch, F., Bartenstein, P., Berner, N. & Røsjøa, S. (2001). Neurophysiological processes underlying the phantom limb pain experience and the use of hypnosis in its clinical management: An intensive examination of two patients. *The International Journal of Clinical and Experimental Hypnosis*, 49(1), 38-55.
- Rosenthal, R. & Rosnow, R. L. (1991). *Essentials of Behavioral Research: Methods and Data Analysis*. McGraw-Hill, New York.
- Ruehle, B. L. & Zamansky, H. S. (1997). The experience of effortlessness in hypnosis: Perceived or real? *The International Journal of Clinical and Experimental Hypnosis*, 45(2), 144-157.
- Sabatier, N., Rowe, I. & Leng, G. (2007). Central release of oxytocin and the ventromedial hypothalamus. *Biochem. Soc. Transact*, 35, 1247-1251.
- Sakaguchi, K., Jonsson, G. K. & Hasegawa, T. (2005). Initial-Interpersonal Attraction between Mixed-Sex Dyad and Movement Synchrony. In: Anolli, S., Duncan, Jr., Magnusson, M.S., Riva, G. (ed.) *The Hidden Structure of Interaction: From Neurons to Culture Patterns*, IOS Press, Amsterdam, 108-120.
- Sanders, S. (1993). Clinical self-hypnosis. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 251-270.
- Sarason, B. R., Sarason, I. G. & Gurong, R. A. R. (1997). Close personal relationships and health outcomes: A key to the role of social support. In: Duck, S. (ed.) *Handbook of personal relationships*. John Wiley & Sons, New York, 541-573.
- Sarason, I. G., Sarason, B. R. & Pierce, G. R. (1994). Relationship-specific social support. In: Burleson, B. R., Albrecht, T. L., Sarason, I. G. (ed.) *Communication of social support*. Sage publications, Thousand Oaks, London, 92-112.
- Scagnelli, J. (1980). Hypnotherapy with psychotic and borderline patient: the use of trance by patient and therapist. *American Journal of Clinical Hypnosis*, 22(3), 164-169.
- Scheff, T. J. (1997). *Emotions, the social bond and human reality*. Cambridge University Press, Cambridge.
- Schore, A. N. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development*. Mahwah, NJ: Erlbaum.
- Schultz, D. (1969). The human subject in psychological research. *Psychological Bulletin*, 72(3), 214-228.
- Scott, E. L., Lagges, A. & LaClave, L. (2008). Treating children using hypnosis. In: Nash, M. R. and Barnier, A. J. (ed.) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 593-609.
- Scott, K. D., Berkowitz, G. & Klaus, M. (1999). A comparison of intermitten and continuous support during labor: A meta analysis. *American Journal of Obstetricians and Gynecologists*, 180, 1054-1059.
- Shapiro, D. H. (1980). *Meditation: Self-regulation strategy and altered state of consciousness*. Aldine, New York.

- Sheehan, P. W. (1971). Countering preconceptions about hypnosis: an objective index of involvement with the hypnotist. *Journal of Abnormal Psychology Monograph*, 78(3), 299-322.
- Sheehan, P. W. (1975). *A neoclassical account of experimental method: Some dilemmas for the social scientist*. University of Queensland Press, St. Lucia, Queensland.
- Sheehan, P. W. (1979). Hypnosis considered as an altered state of consciousness. In: Underwood, G., Stevens, R. (eds) *Aspects of consciousness Vol. 1. Psychological Issues*, London, Academic Press., 219-243.
- Sheehan, P. W. (1980). Factors influencing rapport in hypnosis. *Journal of Abnormal Psychology*, 89, 263-281.
- Sheehan, P. W. (1982-83). Imaginative Consciousness - Function, Process and Method. *Imagination, Cognition and Personality*, 2, 177-194.
- Sheehan, P. W. (1986). Theories of hypnosis - useful or necessary paths to truth? *The Journal of Behavioral and Brain Sciences*, 9, 483.
- Sheehan, P. W. (1991). Hypnosis, context, and commitment. In: Lynn, J. L., Rhue, J. W. (ed.) *Theories of hypnosis. Current models and perspectives*. Guilford Press, New York, 520-541.
- Sheehan, P. W. (1992). The phenomenology of hypnosis and the Experiential Analysis Technique. In: Fromm, E., Nash, M. R. (ed.) *Contemporary Hypnosis Research. The Cutting Edge*. Guilford Press, New York, 364-389.
- Sheehan, P. W. & Dolby, R. M. (1979). Motivated involvement in hypnosis: the illustration of clinical rapport through hypnotic dream. *Journal of Abnormal Psychology*, 88(5), 573-583.
- Sheehan, P. W. & McConkey, K. M. (1982). *Hypnosis and experience: The exploration of phenomena and process*. Lawrence Erlbaum, Hillsdale, New Jersey.
- Sheehan, P. W., McConkey, K. M. & Cross, D. (1978). Experiential analysis of hypnosis: Some new observations on hypnotic phenomena. *Journal of Abnormal Psychology*, 87, 570-575.
- Shor, R. E. (1962). Three dimensions of hypnotic depth. *The International Journal of Clinical and Experimental Hypnosis*, 10, 23-38.
- Shor, R. E. (1979). A phenomenological method for the measurement of variables important to an understanding of the nature of hypnosis. In: Fromm, E., Shor, R. E. (ed.) *Hypnosis: Developments in research and new perspectives*. Aldine, New York.
- Shor, R. E. & Orne, E. C. (1962). *The Harvard Group Scale of Hypnotic Susceptibility*. Consulting Psychologists Press, Palo Alto, California, Consulting Psychologists Press.
- Shor, R. E., Orne, M. T. & O'Connell, D. N. (1962). Validation and cross-validation of a scale of self-reported personal experiences which predicts hypnotizability. *Journal of Psychology*, 53, 55-75.
- Simkin, P. & Bolding, A. (2004). Update on nonpharmacologic approaches to relieve labor pain and prevent suffering. *Journal of Midwifery and Women's Health*, 49 (6), 489-503.
- Simpson, J. A. (1999). Attachment theory in modern evolutionary perspective. In: Cassidy, J. and Shaver, P. R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London, 115-140.
- Siuta, J. (2010). Polish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *The International Journal of Clinical and Experimental Hypnosis*, 58(4), 433-443.

- Skuban, E. M., Shaw, D. S., Gardner, F., Supplee, L. H. & Nichols, S. R. (2006). The correlates of dyadic synchrony in high-risk, low-income toddler boys. *Infant Behaviour and Development*, 29, 423-434.
- Slade, A. (1999). Attachment theory and research. Implications for theory and practice of individual psychotherapy with adults In: Cassidy, J. and Shaver, P. R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London. 575-594.
- Spanos N. P., Stenstrom R. J. & Johnston J. C. (1988). Hypnosis, placebo, and suggestion in the treatment of warts. *Psychosomatic Medicine*, 50(3), 245-60.
- Spanos, N. P. (1986a). Hypnotic behavior: a social-psychological interpretation of amnesia, analgesia and "trance logic". *The Behavioral and Brain Sciences*, 9, 449-502.
- Spanos, N. P. (1986b). Hypnosis and the Modification of Hypnotic Susceptibility: A Social Psychological Perspective. In P. Naish (ed.) *What is Hypnosis?* Open University Press, London, 85-120.
- Spanos, N. P. & Barber, T. X. (1974). Toward convergence in hypnosis research. *American Psychologist*, 29, 500-511.
- Spanos, N. P., Gabora, N. J., Jarrett, L. E. & Gwynn, M. I. (1989). Contextual determinants of hypnotizability and of relationships between hypnotizability scales. *Journal of Personality and Social Psychology*, 57(2), 271-278.
- Spanos, N. P., Kennedy, S. K. & Gwynn, M. I. (1984). Moderating effects of contextual variables on the relationship between hypnotic susceptibility and suggested analgesia. *Journal of Abnormal Psychology*, 93(3), 285-294.
- Spiegel, D. (1993). Hypnosis in the treatment of posttraumatic stress disorder. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 493-508.
- Spiegel, D. (2002). Mesmer minus magic: Hypnosis and modern medicine. *The International Journal of Clinical and Experimental Hypnosis*, 50(4), 397-406.
- Spiegel, D. (2003). Negative and Positive Visual Hypnotic Hallucinations: Attending Inside and Out. *The International Journal of Clinical and Experimental Hypnosis*, 51(2), 130-146.
- Spiegel, H. (1959). Hypnosis and Transference. A Theoretical Formulation. *Archives of General Psychiatry*, 1(6), 634-639.
- Spiegel, S. B. & Kahn, S. (2001). Being „the other therapist”: The varieties of adjunctive experience with hypnosis. *The International Journal of Clinical and Experimental Hypnosis*, 49(4), 339-351.
- Spielberger, C. D., Gorsuch, R. L. & Lushene, R. E. (1970). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, Calif. Consulting Psychologist Press.
- Spinhoven, P., Vanderlinden, J., Ter Kuile, M. M. & Linssen, C. G. (1993). Assessment of hypnotic processes and responsiveness in a clinical context. *The International Journal of Clinical and Experimental Hypnosis*, 41, 210-223.
- Steiger, J. H. (1980). Tests for Comparing Elements of a Correlation Matrix. *Psychological Bulletin*, 87, 245-251.
- Stern, D. (1985). *The interpersonal world of the infant*. Basic books, New York.
- Strauss, B. S. (1993). Operator variables in hypnotherapy. In: Rhue, J. W., Lynn, S. J., Kirsch, I. *Handbook of clinical hypnosis*. American Psychological Association, Washington, DC, 55-72.

- Stroop, J. R. (1935). Studies of Interference in Serial Verbal Reactions. *Journal of Experimental Psychology*, 18, 643-662. Online: <http://psychclassics.yorku.ca/Stroop/>
- Szabó, Cs. (1989). *Szubjektív élmények különböző indukciós technikákkal létrehozott hipnózisokban*. Doktori értekezés, KLTE Debrecen. [Subjective experiences induced by various hypnosis techniques]. Unpublished doctoral dissertation, Kossuth Lajos University, Debrecen, Hungary.
- Szabó, Cs. (1993). The phenomenology of the experiences and the depth of hypnosis: Comparison of direct and indirect induction techniques. *International Journal of Experimental and Clinical Hypnosis*, 41, 225-233.
- Szekely, A., Kovacs-Nagy, R., Bányai, É. I., Gösi-Greguss, A. C., Varga, K., Halmai, Z., Ronai, Z. & Sasvari-Szekely, M. (2010). Association between hypnotizability and the Catechol-O-Methyltransferase (COMT) polymorphism. *The International Journal of Clinical and Experimental Hypnosis*, 58(3), 301-315.
- Tart, C. T. (1967). Psychedelic experiences associated with a novel hypnotic procedure, mutual hypnosis. *American Journal of Clinical Hypnosis*, 10, 65-78.
- Tart, C. T. (1969). Psychedelic experiences associated with a novel hypnotic procedure, mutual hypnosis. In: C. T. Tart (ed.) *Altered States of Consciousness*. Wiley, New York, 291-308.
- Tart, C. T. (1970a). Marijuana intoxication: common experiences. *Nature*, 226(5247), 701-704.
- Tart, C. T. (1970b). Self-report scales of hypnotic depth. *The International Journal of Clinical and Experimental Hypnosis*, 18, 105-125.
- Tart, C. T. (1972a). States of Consciousness and state-specific science. *Science*, 176, 1203-1210.
- Tart, C. T. (1972b). *Altered States of Consciousness*. Anchor Book Doubleday and Company Inc., New York.
- Tart, C. T. (1986). Consciousness, altered states, and worlds of experience. *The Journal of Transpersonal Psychology*, 18, 159-170.
- Tart, C. T. & Kvetensky, E. (1973). Marijuana intoxication: Feasibility of experimental scaling of level. *Journal of Altered States of Consciousness*, 1, 15-21.
- Tasso, A. F. & Pérez, N. A. (2008). In: Nash, M. R. and Barnier, A. J. *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York, 283-309.
- Tauszik, K., Bányai, É., Gösiné, Greguss A., Varga, K. & Székely, A. (2006), Hipnotizőrök archaikus bevonódásának vizsgálata. *Poszter a Magyar Hipnózis Egyesület 17. Magyar Hipnózis Találkozóján*, Budapest-Csillaghegy, 2006. május 5-7.
- Taylor, G. J., Bagby, R. M. & Parker, J. D. A. (1997). *Disorders of affect regulation*. Cambridge University Press, Cambridge.
- Tellegen, A. (1978-79). On measures and conceptions of hypnosis. *American Journal of Clinical Hypnosis*, 21, 219-237.
- Tellegen, A. & Atkinson, G. (1974). Openness to absorbing and self-altering experiences („absorption”), a trait related to hypnotic susceptibility. *Journal of Abnormal Psychology*, 83(3), 268-277.
- Thompson, R. A. (1999). Early attachment and later development. In: Cassidy, J. and Shaver, P. R. *Handbook of attachment. Theory, research and clinical applications*. Guilford Press, New York, London. 265-286.

- Tickle-Degnen, L. & Rosenthal, R. (1990). The nature of rapport and its nonverbal correlates. *Psychological Inquiry*, 1(4), 285-293.
- Tidwell, M. O., Reis, H. T. & Shaver, P. R. (1996). Attachment, attractiveness, and social interaction: a diary study. *Journal of Personality and Social Psychology*, 71(4), 729-745.
- Trevarthen, C. & Aitken, K. J. (2001). Infant Intersubjectivity: Research, Theory, and Clinical Applications. *Psychiatry. Journal of Child Psychology and Psychiatry*, 42(1), 3-48.
- Turner, R. A., Altemus, M., Enos, T., Cooper, B. & McGuinness, T. (1999). Preliminary research on plasma oxytocin in normal cycling women: investigating emotion and interpersonal distress. *Psychiatry*, 62, 97-113.
- Urbán, R., Varga, K. & Józsa, E. (1998). Toward the research on the phenomenology of social interactions. *Poster presented on 9th International Conference on Personal Relationships*, Saratoga Springs, USA, June 20-24.
- Urbán, R. (1994). Az intimitásról. *Magyar Pszichológiai Szemle*, 1-2, 84-98.
- Urbán, R. (1996). Felnőttkötődés és intim kapcsolatok. *Magyar Pszichológiai Szemle*, 4-6, 347-362.
- Urbán, R. (2002). A Közös Rorschach alkalmazása nem klinikai helyzetben: az interakciós szinkronitás és a raport vizsgálata. In: Bagdy Emőke (szerk.) *A párkapcsolatok dinamikája*. Animula Kiadó, Budapest, 169-177.
- Uvnäs-Moberg, K. (1998a). Oxytocin may mediate the benefits of positive social interaction and emotions. *Psychoneuroendocrinology*, 23(8), 819-35.
- Uvnäs-Moberg, K. (1998b). Antistress pattern induced by oxytocin. *News in Physiological Sciences*, 13(1), 22-26.
- Uvnäs-Moberg, K., Arn, I. & Magnusson, D. (2005). The psychobiology of emotion: The role of the oxytocinergic system. *International Journal of Behavioral Medicine*, 12(2), 59-65.
- Uvnäs-Moberg, K., Bjökstrand, E., Hillegaart, V. & Ahlenius, S. (1999). Oxytocin as a possible mediator of SSRI-induced antidepressant effects. *Psychopharmacology*, 142(1), 95-101.
- Uvnäs-Moberg, K. & Petersson, M. (2004). Oxytocin-biochemical link for human relations. Mediator of antistress, well-being, social interaction, growth, healing... *Läkartidningen*, 101(35), 2634-2639.
- Vaitl, D., Bierbaumer, N., Gruzelier, J., Jamieson, G. A., Kotchoubey, B., Kübler, A., Lehmann, D., Miltner, W. H., Ott, U., Pütz, P., Sammer, G., Strauch, I., Strehl, U., Wackermann, J. & Weiss, T. (2005). Psychobiology of Altered States of Consciousness. *Psychological Bulletin*, 2005, 131(1), 98-127.
- Van Stegeren, A. H., Wolf, O. T. & Kindt, M. (2008). Salivary alpha amylase and cortisol responses to different stress tasks: impact of sex. *International Journal of Psychophysiology*, 69, 33-40.
- Vandenberg, B. (1998a). Hypnosis and human development: Interpersonal influence of intrapersonal processes. *Child Development*, 69, 262-267.
- Vandenberg, B. (1998b). Infant communication and the development of hypnotic responsivity. *The International Journal of Clinical and Experimental Hypnosis*, 46(4), 334-350.
- Varga, K., Józsa, E., Bányai, E. I. & Gösi-Greguss, A. Cs. (2008). Interactional Phenomenology of Maternal and Paternal Hypnosis Styles. *Contemporary Hypnosis*, 25(1), 14-28.

- Varga S., K. (2008). Egymásra hangolódás. Nyitottság és határok – az elmélet megjelenése a gyakorlatban. /Interactive emotional attunement – openness and boundaries. Theoretical relevance in practice/ *Pszichoterápia*, 17(4), 264-271.
- Varga S., K. (2011). *Vizuális Imaginatív Szinkron*, PhD. Disszertáció, ELTE-PPK Pszichológia Doktori Iskola, Magatartápszichológiai Program, Témavezető: Varga Katalin, Kézirat.
- Varga S., K. & Varga, K. (2009a). A Vizuális Imaginatív Szinkron fogalma és operacionalizálásának első lépései. /The concept of Visual Imaginative Synchron and the preliminary results in its operationalization/ *Magyar Pszichológia Szemle*, 64(2), 359-384.
- Varga S., K. & Varga, K. (2009b). Visual Imaginative Synchrony. *Contemporary Hypnosis*, 26(3), 146-158.
- Varga, K. (1991). A hipnózis szubjektív élményének és viselkedéses szintjének összehasonlító elemzése. Doktori Értekezés. ELTE BTK, Budapest.
- Varga, K. (2000). Néhány gondolat az indulatáttételről, és annak hipnózis vonatkozásairól. *Hipno-Info*, XLII, 101-108.
- Varga, K. (2004a). A hipnotikus kapcsolat élményvilágának interakciós szemléletű elemzése. Habilitációs értekezés, ELTE, Budapest.
- Varga, K. (2004b). The possible explanation of metaphors in re-interpreting negative life events: our experiences with the critically ill. *Hypnos*, 31(4), 201-207.
- Varga, K. (2008). *Szuggesztív kommunikáció a szomatikus orvoslásban*. VL Sugár Bt., Budapest.
- Varga, K. (2009). Szexualitás, szülés, kötődés, az oxytocin pszichoemotív hatásai. In: Bagdy, E., Demetrovics, Zs., Pilling, J. (szerk.) *Polihistória. Közönlők és tanulmányok Buda Béla 70. születésnapja alkalmából*. Akadémia Kiadó, Budapest, 447-474.
- Varga, K. (2011a). A metaforák lehetséges magyarázata a negatív életesemények újraértelmezésében: tapasztalataink kritikus állapotú betegekkel. *Pszichoterápia*, 20(2), 109-116.
- Varga, K. (2011b). A transzgenerációs hatások az epigenetikai kutatások tükrében. *Magyar Pszichológiai Szemle*, 66(3), 507-532.
- Varga, K. (2011c). *Beyond the Words.: Communication and Suggestion in Medical Practice*. Nova Science Publishers Inc., New York.
- Varga, K. (2011d). *A szavakon túl.: Kommunikáció és szuggesztív az orvosi gyakorlatban*. Medicina Könyvkiadó, Budapest.
- Varga, K. (2012). „Csukott szemmel hallgatlak...” – a hipnózishelyzet sajátosságai és a korrektív kapcsolati élmény kérdése. In: Varga, K., Gősiné Greguss, A. (szerk.) *Interaktívan: tanulmányok az emberi kapcsolatok világáról*, L'Harmattan Kiadó, Budapest, 179-200.
- Varga, K., Bányai, É. I. & Gősi-Greguss, A. C. (1991). Investigating the phenomenological level of hypnosis within the social psychobiological model of hypnotic interaction. *Paper presented at the Second European Congress of Psychology*, Budapest, Hungary, July 8-12, 1991.
- Varga, K., Józsa, E., Bányai, É. I. & Gősi-Greguss, A. C. (2012). Phenomenological synchrony and hypnotic susceptibility. *Contemporary hypnosis and Integrative Therapy*, 29(2), 156-168.

- Varga, K., Józsa, E., Bányai, É. & Gösi-Greguss, A. C. (2009a). Patterns of interactional harmony: The phenomenology of hypnosis interaction. In Koester G. D., Delisle P. R. (eds.) *Hypnosis Theories, Research and Applications*. Nova Science Publishers Inc., New York, 53-98.
- Varga, K., Józsa, E., Bányai, É. & Gösi-Greguss, A. C. (2009b). Interactional synchrony and hypnotizability. *XVIII. International Congress of the International Society of Hypnosis*. Rome, 2009.09.22-26.
- Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (1993). The Hypnotist in the Hypnosis Interaction: Phenomenological Investigation. *Paper presented at the 6th European Congress of Hypnosis*, August, 1993, Vienna, Austria. 14-20.
- Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (1994). Parallel Application of the Experiential Analysis Technique with Subject and Hypnotist: A New Possibility for Measuring Interactional Synchrony. *The International Journal of Clinical and Experimental Hypnosis*, 42(1), 130–139.
- Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (1996). Harmony in phenomenology: a new way to measure interactional synchrony. *Paper presented at the 7th European Congress of Hypnosis*, Budapest, Hungary, August 17-23, 1996.
- Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (1997). New ways of characterizing the phenomenological aspect of rapport. *Paper presented at the 14th International Congress of Hypnosis*, San Diego, California, June 21-27, 1997.
- Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (1999). Hypnotists' Phenomenology: Toward the Understanding of Hypnotic Interactions. *Hypnos*, 26(4), 181-193.
- Varga, K., Bányai, É. I. & Gösi-Greguss, A. C. (2000). Transference and Countertransference in Experimental Hypnotic Settings. *15. International Congress of Hypnosis*, München, 2-7. October 2000, *Book of Abstracts*, 128.
- Varga, K., Bányai, E. I. & Gösi-Greguss, A. C. (1995). The hypnotist in the hypnosis interaction: phenomenological investigation. In: Bölcs, E., Guttmann, G., Martin, M. et al. (ed.) *6th European Congress of Hypnosis in Psychotherapy and Psychosomatic Medicine*, 138-142.
- Varga, K., Bányai, É. I., Gösi-Greguss, A. C. & Horváth, R. J. (1992). Interactional Application of Experiential Analysis Technique. Abstract. In *Book of Abstracts of the 12th International Congress of Hypnosis*. Jerusalem. Israel. July 25–31, 38.
- Varga, K., Bányai, E. I., Gösi-Greguss, A. C. & Tauszik, K. (n.d.): Phenomenological Aspects of Hypnotic Interactions: The Effect of Kinship. Paper accepted to *The International Journal of Clinical and Experimental Hypnosis*.
- Varga, K., Bányai, É. I., Józsa, E. & Gösi-Greguss, A. C. (2008). Interactional Phenomenology of Maternal and Paternal Hypnosis Styles. *Contemporary Hypnosis*, 25(1), 14-28.
- Varga, K., Bányai, É. & Gósiné-Greguss, A. (2004). A hipnotizőr a hipnotikus interakcióban: a szubjektív élmények elemzése. *Pszichoterápia*, 13(3), 140-147.
- Varga, K. & Diószeghy, Cs. (2001). *Hűtésbefizetés, avagy a szuggesziók szerepe a mindennapi orvosi gyakorlatban*. Pólya Kiadó, Budapest.
- Varga, K. & Diószeghy, Cs. (2003a). A formális hipnózis szerepe a kritikus állapotú betegek intenzív terápiájában. *XIV. Magyar Hipnózis Találkozó*. Budapest, 2003. június 6-8. Absztraktkötet, 16.

- Varga, K. & Diószeghy, Cs. (2003b). The use of hypnotic communication and hypnotic suggestions in the Intensive Care Unit. *Hypnos* 30(1), 16-26.
- Varga, K., Józsa, E., Bányai, É. I. & Gósi-Greguss, A. C. (2006). A New Way of Characterizing Hypnotic Interactions: Dyadic Interactional Harmony (DIH) Questionnaire. *Contemporary Hypnosis*, 23(4), 151-166.
- Varga, K., Józsa, E., Bányai, É. I., Gósi-Greguss, A. C. & Suhai-Hodász, G. (2004). Hypnosis Interaction from an Evolutionary Perspective: the Patterns of Harmony in Phenomenology. *Paper presented at the 16th International Congress of Hypnosis Singapore, Book of Abstracts*, 17. October 17–22, 2004.
- Varga, K., Józsa, E., Bányai, É., Gósi-Greguss, A. C. & Kumar, V. K. (2001). Phenomenological experiences associated with hypnotic susceptibility. *The International Journal of Clinical and Experimental Hypnosis*, 49(1), 19-29.
- Varga, K., Józsa, E. & Urbán, R. (2002). A Közös Rorschach Vizsgálati Helyzet alkalmazása a diádikus interakciók élményvilágában megmutatkozó harmónia fokának vizsgálatára. In: Bagdy Emőke (szerk.) *A párkapcsolatok dinamikája*. Animula Kiadó, Budapest, 178-185.
- Vas, J. (1993). The “counter-trance” concept: pulling psychotic patients out of the well of pathological regression. *Hypnos*, 20(2), 94-99.
- Vas, J. P. & Cszaszar, N. (2011). Trans-natal Tandem Hypnotherapy (TTH): A New Method for Resolving Prenatal Traumas. *International Journal of Psychotherapy*, 15(1), 55–64.
- Vassend, O. (1988). Dimensions of hypnotic depth: an exploratory study. *Scandinavian Journal of Psychology*, 29, 207-213.
- Wachtel, P. L. (1973). Psychodynamics, Behavior Therapy, and the Implacable Experimenter: An Inquiry Into the Consistency of Personality. *Journal of Abnormal Psychology*, 82, 324-334.
- Wahler, R. G., Herring, M. & Edwards, M. (2001). Coregulation of Balance Between Children’s Prosocial Approaches and Acts of Compliance: A Pathway to Mother-Child Cooperation? *Journal of Clinical Child Psychology*, 30(4), 473-478.
- Ward, A., Ramsay, R., Turnbull, S., Steele, M., Steele, H. & Treasure, J. (2001). Attachment in anorexia nervosa: a transgenerational perspective. *British Journal of Medical Psychology*, 74(4), 497-505.
- Watchel, P. L. (1973). Psychodynamics, behavior therapy, and the implacable experimenter: an inquiry into the consistency of personality. *Journal of Abnormal Psychology* 82, 324-334.
- Watkins, H. H. (1980). The silent abreaction. *The International Journal of Clinical and Experimental Hypnosis*, 24, 381-390.
- Watkins, J. G. (2000). The Psychodynamic Treatment of Combat Neuroses (Ptd) With Hypnosis During World War II. *The International Journal of Clinical and Experimental Hypnosis*, 48(3), 324-335.
- Watkins, J. G. & Watkins, H. H. (1986). Ego states as altered states of consciousness. In B. B. Wolman, M. Ullman (ed.) *Handbook of states of consciousness*, (133-158). New York: Van Nostrand Reinhold.
- Watkins, J. G. & Watkins, H. H. (1990). Ego-state transferences in the hypnoanalytic treatment of dissociative reactions. In M. L. Fass, D. Brown (ed.) *Creative mastery in hypnosis and hypnoanalysis: A Festschrift for Erika Fromm*, (255-261). Hillsdale, NJ: Lawrence Erlbaum.

- Watkins, J. G. & Watkins, H. H. (2000). The psychodynamics and initiation of effective abreactive experiences. *Hypnos*, 25(2), 60-67.
- Waugh, R. M. (2002). *A Grounded Theory Investigation of Dyadic Interactional Harmony and Discord: Development of a Nonlinear Dynamical Systems Theory and Process-Model*. Dissertation, University of Texas, Austin.
- Weaver, I. C. G. (2004). Epigenetic programming by maternal behavior and pharmacological intervention. Nature versus nurture: let's call the whole thing off. *Epigenetics*, 2(1), 22-8.
- Weisenberg, M. (1998). Cognitive aspects of pain and pain control. *The International Journal of Clinical and Experimental Hypnosis*, 46(1), 44-61.
- Weisman, O., Zagoory-Sharon, O. & Feldman, R. (2012). Intranasal oxytocin administration is reflected in human saliva. *Psychoneuroendocrinology* 37, 1582-1586.
- Weitzenhoffer, A. M. (1978). Hypnotism and altered states of consciousness. In Sugarman, A., Tarter, R. E. (ed.) *Expanding dimensions of consciousness*. Springer, New York, 183-225.
- Weitzenhoffer, A. M. (1980). Hypnotic susceptibility revisited. *American Journal of Clinical Hypnosis*, 22(3), 130-146.
- Weitzenhoffer, A. M. (1989). *The practice of hypnotism*. A Wiley-Interscience Publication, John Wiley and Sons, New York.
- Weitzenhoffer, A. M. & Hilgard, E. R. (1962). *Stanford Hypnotic Susceptibility Scale, Form C*. Consulting Psychologists Press, Palo Alto, California.
- Weitzenhoffer, A. M. & Hilgard, E. R. (1959). *Stanford Hypnotic Susceptibility Scale, Forms A and B*. Consulting Psychologists Press, Palo Alto, California.
- Werner, C. M. & Baxter, L. A. (1994). Temporal qualities of relationships: Organismic, Transactional and Dialectical Views. In: Knapp, M. L., Miller, G. R. (ed.) *Handbook of Interpersonal Communication*. Sage Publications, Thousand Oaks, London, New Delhi. 323-379.
- White, R. W. (1941). A preface to the theory of hypnosis. *Journal of Abnormal and Social Psychology*, 36, 477-505.
- Whitehead, S. (1996). A phenomenological approach to understanding the nature of the hypnotist-subject interaction. *Paper presented at the 7th European Congress of Hypnosis*, Budapest, Hungary, August 17-23.
- Whitehead, S., Noller, P. & Sheehan, P. W. (2008). The hypnotist in the hypnosis interaction: The impact of first impressions on perceptions of hypnotizability. *The International Journal of Clinical and Experimental Hypnosis*, 56(4), 394-424.
- Willi, J. (1969). Joint Rorschach Testing of Partner Relationship. *Family Process*, 8(1), 64-78.
- Wiltshire, A. (2007). *Synchrony as the Underlying Structure of Gesture: The Relationship between Speech Sound and Body Movement at the Micro Level*. School of Languages and Linguistics, The University of Melbourne.
- Woodside, L. N., Kumar, V. K. & Pekala, R. J. (1997). Monotonous percussion drumming and trance postures: A controlled evaluation of phenomenological effects. *Anthropology of Consciousness*, 8 (2-3), 69-87.
- Woody, E. Z. & McConkey, K. M. (2003). What we don't know about the Brain and Hypnosis, but need to: A View from the Buckhorn In. *The International Journal of Clinical and Experimental Hypnosis*, 51(3), 309 -338.

- Xu, J. & Roberts, R. E. (2010). The power of positive emotions: It's a matter of life or death – Subjective well-being and longevity over 28 years in a general population. *Health Psychology, 29*(1), 9-19.
- Yapko, M. D. (2008). Hypnotic approaches to treating depression. In: Nash, M. R. and Barnier, A. J. (ed.) *The Oxford handbook of hypnosis*. Oxford University Press, Oxford, New York 549-567.
- Zak P. J. & Fakhar A. (2006). Neuroactive hormones and interpersonal trust: International evidence. *Economics and Human Biology, 4*, 412–429.
- Zak, P. J., Kurzban, R. & Matzner, W. T. (2005). Oxytocin is associated with human trustworthiness. *Hormones and Behavior, 48*, 522-527.
- Zamansky, H. S. & Clark, L. E. (1986). Cognitive competition and hypnotic behavior. *The International Journal of Clinical and Experimental Hypnosis, 34*(3), 205-214.

Nova Science Publishers, Inc.

INDEX

A

abreaction, 59, 60, 80, 154, 228, 266, 328
absorption, 2, 22, 88, 93, 111, 153, 228, 230, 312, 313, 319, 324
abuse, 64, 189, 257, 309, 320
active-alert hypnosis, 70, 118, 119, 121, 206, 221, 228
affect regulation, 17, 18, 58, 324
affiliation, 25, 105, 193, 196, 310
Affiliative Conflict Theory, 25
alexithymia, 40
altered states of consciousness, 1, 2, 20, 70, 93, 97, 98, 110, 121, 136, 137, 185, 208, 237, 263, 280, 298, 315, 328, 329
analytic-cognitive style, 177
animal magnetism, 2, 47, 73, 205, 296, 306
archaic involvement, 78, 93, 102, 109, 118, 126, 134, 160, 171, 201, 219, 264, 284, 315, 317
Archaic Involvement Measure (AIM), 98, 99, 134, 239, 253, 283
archaic relational pattern, 102, 213
archaic relationship, 88, 213
Arousal-labeling theory, 25
attachment, 5, 23, 24, 36, 37, 38, 39, 42, 44, 45, 59, 60, 62, 63, 64, 65, 66, 67, 99, 109, 171, 193, 196, 213, 214, 215, 216, 223, 225, 226, 234, 235, 237, 248, 251, 252, 253, 254, 258, 261, 283, 291, 299, 301, 302, 305, 309, 310, 312, 313, 314, 315, 320, 322, 323, 324
attachment forms of couples, 248
attachment icon, 62
attachment style, 23, 42, 44, 63, 65, 66, 215, 226, 237, 258
attention, 1, 15, 16, 18, 19, 27, 29, 31, 35, 38, 39, 40, 41, 56, 57, 61, 66, 69, 73, 74, 75, 77, 89, 97, 101, 102, 111, 115, 121, 122, 123, 125, 129, 131, 135, 140, 143, 153, 154, 165, 171, 178, 206, 207, 208,

209, 223, 224, 227, 230, 232, 234, 235, 242, 249, 250, 251, 263, 266, 277, 285, 287, 292, 318
attunement, 1, 8, 17, 18, 20, 21, 23, 36, 42, 54, 75, 108, 157, 158, 159, 162, 202, 209, 212, 216, 217, 219, 220, 222, 227, 244, 245, 247, 250, 251, 253, 264, 280, 293, 296, 305, 326

B

behavior matching, 18
behavioral coding, 29
behavioral mimicry, 37, 38, 247
behavioral reciprocity, 21
Bidimensional Model, 25
bonding, 35, 193, 196, 246, 311
Bowlby, 44, 62, 65, 225, 234, 235, 237, 244, 258, 300
brain, 4, 49, 128, 156, 193, 197, 202, 206, 209, 210, 212, 222, 230, 241, 242, 295, 298, 312

C

central oxytocin system, 193, 197
chameleon effect, 18, 302, 313
concordance, 20, 21, 29, 108, 136, 186, 191, 240, 245, 259, 260
consciousness, xiii, 2, 4, 5, 6, 9, 20, 40, 56, 70, 96, 97, 101, 102, 110, 115, 118, 123, 126, 129, 134, 139, 140, 154, 159, 171, 179, 183, 184, 216, 217, 219, 228, 230, 240, 241, 243, 244, 247, 249, 262, 263, 277, 279, 290, 304, 309, 314, 318, 319, 320, 321, 322, 328, 329
contagion, 15, 69, 309
content analysis, 90, 97, 98, 101, 102, 135, 136, 137, 139, 140, 277, 278
context of hypnosis, 3, 4, 70, 71, 220

control, xiii, 3, 4, 18, 24, 29, 36, 39, 51, 53, 54, 57, 60, 61, 62, 68, 69, 70, 92, 97, 101, 110, 111, 113, 114, 115, 124, 125, 129, 139, 140, 154, 155, 159, 171, 190, 194, 197, 205, 208, 210, 211, 224, 230, 232, 237, 242, 244, 247, 251, 253, 261, 263, 271, 277, 283, 286, 287, 288, 291, 292, 293, 295, 305, 314, 317, 318, 329

cooperation, 5, 8, 16, 37, 38, 51, 57, 76, 115, 146, 163, 165, 208, 260

coping, 57, 63, 68, 154, 193, 226, 293

coregulation, 43, 305

correctional capacity, 44

corrective experiences, 44, 251, 252, 258

cortex, xiii, 26, 27, 156, 206, 209, 211, 212, 230, 251, 311

cortisol, 26, 193, 195, 197, 198, 199, 200, 201, 202, 241, 308, 325

countering, 52, 54, 243

counter-transference, 118, 224

couples, 40, 44, 69, 163, 165, 166, 195, 196, 215, 245

cyclic analysis, 245

D

degree of harmony, 32, 33, 106, 107, 240

depth of hypnosis, 86, 87, 88, 90, 134, 137, 277, 324

dissociative ability, 153

dyadic interaction, vii, 10, 16, 17, 22, 27, 29, 47, 49, 112, 144, 161, 206, 215, 239, 246, 263

Dyadic Interactional Harmony (DIH), 112, 239, 253, 283, 328

dyadic patterns, 247

dysregulation, 211, 212

E

early interactional patterns, 254

effectance, 39, 40

ego strength, 60

emotional charge, 37, 62, 78, 212, 216, 224, 228, 241, 242

emotional regulation, 211, 212, 251

empathy, 15, 38, 42, 68, 126, 159, 225, 226, 233, 236, 247, 262, 263, 303

enactive intersubjectivity, 258, 259

engagement, 8, 22, 40, 41, 214

entrainment, 18, 299

expectations, 3, 25, 27, 52, 56, 66, 68, 69, 76, 121, 129, 131, 153, 183, 233, 234, 242, 243, 245, 258

Experiential Analysis Technique (EAT), 54, 55, 103

experimental manipulations, 55

eye closure, 205, 209, 230

F

factor structure behind suggestibility, 242

fantasy, 2, 94, 124, 154, 157, 209, 220, 224, 258, 291

Ferenczi, 74, 75, 177, 234, 305

free report, 97, 98, 101, 102, 110, 120, 129, 134, 135, 140, 148, 243, 277

Freud, 74, 75, 77, 80, 153, 210, 224, 234, 306

frontolimbic orbital cortex, 251

G

gesture, 68

goodness of fit, 45, 249

H

hemisphere, 26, 157, 209, 211, 212, 213, 216, 230, 251

heritability, 185, 316

homeostatic regulation, 39

hyperactivity, 42

hypnosis research, 1, 2, 4, 6, 10, 20, 21, 23, 24, 50, 51, 53, 56, 86, 117, 188, 190, 203, 210, 227, 253, 282, 302, 317, 323

hypnosis styles, 56, 108, 148, 163, 175, 177, 178, 179, 180, 181, 182, 183, 241, 247, 258, 260, 272

hypnotic context, 71, 126, 227, 230

hypnotic depth, 90, 310, 322, 324, 328

hypnotic interaction, vii, 1, 5, 21, 32, 43, 47, 50, 55, 83, 102, 107, 112, 114, 118, 129, 143, 147, 175, 185, 186, 193, 197, 224, 239, 240, 241, 245, 247, 250, 253, 254, 259, 268, 307, 326

hypnotic relationship, 10, 40, 51, 58, 59, 62, 66, 67, 68, 78, 79, 83, 157, 203, 205, 206, 221, 223, 228, 231, 233, 260, 296

hypnotic susceptibility, xiii, 1, 23, 49, 53, 54, 55, 83, 85, 86, 89, 90, 91, 92, 93, 94, 95, 97, 98, 99, 100, 101, 102, 105, 112, 114, 115, 120, 129, 133, 135, 137, 153, 159, 166, 167, 168, 169, 170, 175, 177, 178, 186, 188, 189, 190, 197, 199, 201, 202, 205, 219, 230, 231, 240, 241, 248, 253, 281, 296, 303, 308, 312, 316, 318, 319, 320, 323, 324, 326, 328

hypnotism, 6, 90, 129, 131, 133, 147, 203, 243, 262, 306, 311, 329

hypnotist, vii, xiii, 1, 2, 6, 8, 9, 10, 22, 36, 39, 40, 47, 49, 50, 51, 52, 53, 54, 55, 57, 59, 67, 69, 70, 71, 77, 78, 79, 87, 88, 93, 97, 98, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 113, 114, 117, 118,

119, 120, 121, 122, 124, 125, 126, 127, 128, 129, 131, 133, 134, 136, 137, 139, 140, 142, 143, 147, 148, 157, 159, 160, 161, 162, 169, 170, 171, 178, 179, 183, 186, 187, 188, 190, 191, 197, 199, 201, 202, 203, 205, 206, 208, 209, 210, 213, 217, 218, 219, 220, 221, 223, 224, 225, 226, 227, 232, 233, 234, 235, 236, 237, 240, 241, 242, 243, 246, 248, 249, 251, 253, 254, 255, 258, 259, 261, 262, 264, 266, 267, 268, 271, 274, 277, 278, 279, 280, 281, 282, 284, 291, 292, 293, 297, 298, 300, 304, 307, 322, 327, 329

I

imagery, xiii, 10, 88, 89, 93, 101, 102, 107, 111, 113, 114, 129, 151, 153, 154, 155, 156, 157, 158, 159, 160, 187, 190, 209, 210, 211, 230, 252, 259, 277, 287, 288, 293, 294, 304, 310, 314, 315, 316
 imagination, 6, 9, 70, 90, 94, 95, 121, 124, 151, 153, 154, 155, 156, 157, 159, 195, 203, 210, 227, 237, 252, 265, 277, 315
 imaginative attunement, 252, 263
 imaginative involvement, 2, 309
 inducing hypnosis, 6, 119
 insecure-avoidant, 37
 insecure-resistant, 37
 interactional approach, vii, 6, 8, 19, 22, 31, 56, 83, 103, 111, 133, 175, 242, 262, 267, 268
 interactional approach to hypnosis, 6, 268
 interactional synchrony, vii, 1, 13, 17, 18, 19, 20, 29, 31, 32, 35, 36, 37, 42, 43, 44, 45, 108, 151, 158, 171, 178, 220, 236, 239, 240, 244, 249, 257, 259, 300, 303, 308, 310
 interdependence, 15, 16, 19, 32, 311
 interpersonal adaptation, 17, 20, 24
 interpersonal attunement, 19
 interpersonal context, 2, 31, 54
 interpersonal cooperation, 20, 38
 intersubjective field, 22
 intersubjectivity, 15, 43, 210, 250, 265, 306
 intimacy, 6, 17, 21, 23, 27, 40, 42, 45, 58, 65, 67, 77, 102, 114, 115, 125, 147, 148, 149, 170, 179, 183, 201, 208, 221, 222, 223, 234, 241, 248, 254, 261, 309, 318
 intimate relationship, 20, 44, 56, 61, 146, 207

J

joint movements,, 239
 Joint Rorschach Testing, 144, 329

K

kinship, 175, 185, 186, 187, 240

L

language, 5, 51, 126, 161, 171, 205, 211, 212, 216, 221, 227, 252, 298, 302, 308, 318
 levels of investigation, 31

M

manipulation, 43, 126, 156, 170, 236, 253
 matching, 1, 16, 17, 18, 19, 24, 29, 108, 212, 213, 247, 300, 317
 maternal hypnosis, 67, 177
 mental imagery, 151, 153, 304
 Mesmer, 2, 73, 74, 153, 224, 323
 mesolimbic dopaminergic system, 258
 meta-analysis, 154, 234, 316
 meta-communication, 141
 methods of behavioral rating, 29
 microanalysis, 29, 32
 mimicry, 18, 37, 38, 209, 313
 mind-related comments, 37, 254, 314
 mirroring, 18, 19, 38, 232, 247, 263, 306, 313
 miscommunication, 246
 mismatch, 39, 44, 250
 model situation, 47, 49, 50, 224
 monitoring, 5, 38, 126, 140, 143, 230, 244
 mother-child-father triads, 36
 movement synchrony, 30, 31
 multisensory processing, 39
 mutual attentiveness, 16, 246
 mutual attunement, 1, 77, 118, 202, 250, 251, 255, 258, 278
 mutual entrainment, 36
 mutual incorporation, 259, 306

N

neglect, 20, 50, 226, 249, 257, 267
 neurophysiological analysis, 242

O

organismic model, 24
 oxytocin, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 211, 241, 253, 255, 257, 258, 299, 305, 308, 309, 315, 316, 321, 325, 326, 329

P

paper-and-pencil test, 94, 97, 109, 112, 134, 135, 140, 163, 197, 198, 219, 243, 244, 247, 259, 274, 283
 Parallel Experiential Analysis Technique (PEAT), 103
 parent-child relationship, 45, 56, 65, 77, 148
 paternal hypnosis, 177, 179, 241
 phenomenological synchrony, 239, 240, 249
 Phenomenology of Consciousness Inventory (PCI), 110, 134, 239, 283, 286, 318
 physiological indices, 19, 20, 96, 118
 placebo, 154, 197, 253, 323
 posture, 1, 16, 18, 19, 30, 32, 108, 122, 163, 164, 178, 214, 239
 posture mirroring, 1, 108, 178, 239
 posture similarity, 30, 164
 pseudointeractions, 30, 31
 psychotherapy, 22, 70, 127, 178, 206, 213, 220, 226, 227, 233, 249, 251, 253, 255, 262, 264, 295, 297, 309, 311, 323
 Puysegur, 2, 74

R

rapport, 6, 16, 17, 35, 37, 38, 40, 51, 52, 54, 55, 70, 73, 77, 122, 133, 135, 166, 170, 178, 197, 205, 206, 213, 223, 236, 244, 246, 274, 295, 299, 301, 306, 307, 309, 313, 315, 322, 325, 327
 reflective self function, 226
 regression, 77, 78, 92, 97, 125, 133, 137, 141, 142, 153, 157, 177, 201, 270, 272, 274, 277, 279, 304, 316, 328
 regulatory function, 35, 43
 relational dimension, 5, 6, 47, 50, 96, 119, 126, 202, 217, 262, 268, 304
 relaxation, 57, 58, 70, 88, 90, 93, 95, 97, 110, 118, 123, 143, 144, 177, 209, 220, 230, 242, 277, 297, 316
 reparation, 39, 246
 resonance, 47, 80, 81, 212, 214

S

secure attachment, 37, 39, 42, 44, 63, 65, 66, 211, 213, 226, 234, 235
 self-hypnosis, 5, 8, 10, 20, 58, 71, 87, 90, 154, 205, 215, 217, 228, 237, 248, 249, 266, 304, 306, 310, 314, 321
 sexual encounter, 144
 shared inner space, 214

significant other, 67, 148
 simulator design, 52, 53
 situational factors, 242, 277
 social biofeedback, 38, 40, 306
 social biofeedback theory, 38, 306
 social contact, 60, 195
 social interaction, 2, 10, 29, 30, 42, 43, 50, 55, 197, 265, 299, 301, 302, 311, 316, 317, 325
 social psychobiological model of hypnosis, 2, 254
 social support, 47, 57, 58, 59, 60, 61, 62, 67, 69, 70, 193, 194, 195, 217, 233, 241, 257, 261, 298, 301, 303, 321
 state-theory, 1
 stress, 5, 39, 57, 58, 59, 60, 61, 69, 118, 123, 126, 188, 193, 194, 195, 197, 202, 213, 223, 234, 241, 253, 255, 266, 304, 305, 318, 323, 325
 subjective experience, 1, 3, 5, 8, 9, 17, 19, 20, 21, 22, 27, 32, 33, 51, 54, 55, 60, 83, 86, 88, 91, 95, 96, 98, 102, 103, 105, 107, 108, 118, 119, 120, 123, 131, 133, 134, 135, 140, 143, 148, 151, 157, 166, 177, 178, 179, 183, 189, 190, 202, 230, 241, 242, 248, 260, 277, 282, 286, 287, 296, 300, 307, 308, 310, 315
 subjective reality, 68, 156, 227, 235, 251, 252
 suggestion, 3, 9, 51, 52, 55, 67, 74, 85, 87, 95, 98, 103, 111, 124, 127, 133, 137, 142, 154, 156, 157, 177, 201, 205, 210, 217, 224, 230, 241, 242, 249, 267, 270, 272, 277, 290, 298, 315, 317, 323

T

temporal analysis, 246, 247
 temporal characteristics of the relationships, 245
 temporal pattern of interactions, 246
 Theory of Discrepancy-Arousal, 25
 therapeutic relationship, 5, 66, 70, 75, 76, 216, 217, 228, 231, 236, 264, 266, 267, 317
 therapist, 5, 6, 19, 22, 32, 44, 50, 58, 59, 60, 70, 71, 74, 75, 76, 78, 79, 80, 81, 117, 121, 122, 126, 128, 131, 156, 157, 158, 160, 206, 207, 213, 214, 216, 217, 224, 227, 228, 232, 233, 234, 235, 236, 237, 243, 246, 247, 248, 252, 253, 262, 263, 264, 265, 266, 268, 300, 321, 323
 therapist-patient relationship, 117
 therapy, 5, 6, 59, 66, 70, 71, 74, 75, 76, 80, 89, 128, 131, 154, 158, 210, 216, 220, 224, 227, 228, 231, 233, 235, 236, 248, 251, 262, 264, 265, 267, 268, 298, 303, 317, 328
 threat, 258
 topographic regression, 143, 153, 210
 training, 53, 131, 263
 transactional (dialectic) models, 24

transference, 16, 47, 50, 73, 74, 75, 76, 77, 78, 79,
80, 81, 118, 119, 120, 126, 128, 213, 224, 232,
236, 237, 243, 284, 315, 317

transgenerational memories, 255

trust, 6, 10, 57, 62, 64, 65, 70, 74, 92, 105, 193, 196,
202, 220, 236, 246, 258, 303, 312, 330

twins, xiii, 35, 186, 187, 188, 190, 191, 241, 254,
293, 294, 316

U

uncertainty, 60, 234, 258

V

verbal communication, 10, 141, 307

verbal contact, 73, 74, 206, 209

verbal suggestion, 57, 70, 118, 157, 203, 209, 210,
251, 259

viability, 15, 35, 260

Visual Imaginative Synchrony (VIS), 144, 157, 158,
160, 251, 275

W

working models, 44, 65, 66, 211, 216, 235, 237, 244,
251, 258

working style, 27, 76, 108, 164, 243, 255

Nova Science Publishers, Inc.