## **ENACTING INTERSUBJECTIVITY**

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# **Enacting Intersubjectivity**

A Cognitive and Social Perspective on the Study of Interactions

### Edited by

## Francesca Morganti

University of Lugano, Lugano, Switzerland Istituto Auxologico Italiano, Milano, Italy

### Antonella Carassa

University of Lugano, Lugano, Switzerland

and

# Giuseppe Riva

Catholic University of Milan, Milano, Italy Istituto Auxologico Italiano, Milano, Italy



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e-mail: iosbooks@iospress.com

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## **PREFACE**

Intersubjectivity is a central theoretical construct intersecting various disciplines. As a research field it is therefore characterised by its being the meeting point of areas and methodologies even very different from each other. In the history of science, when this sort of overlapping takes place, we witness the gradual emergence of ever more complex theoretical constructs, which can become the conceptual ground for building more general theories.

On the other hand, the interest in the area of intersubjectivity arises from the growing awareness of the intrinsically relational nature of the human species, highlighted by numerous recent discoveries in various fields – e.g., neuropsychology, cognitive science, ethology – so much so that some scholars have coined for our species the term "ultra-social species".

The landscape of disciplines involving theoretical or experimental research pertaining to the area of intersubjectivity is vast: neuropsychology and neurosciences, consciousness, emotions, embodiment, the "relational" mind, sharing other people's mind states, and more generally various areas of philosophy, ethology, general and evolutionary psychology, social and cultural psychology, clinical psychology and psychiatry, psychoanalysis.

The intersubjectivity construct is therefore utilized on various levels, corresponding to the specific research areas. On one hand, this points to the power and fecundity of the construct; on the other it may be a source of problems – communication, interpretation, explanation and comparison problems – when the meeting involves disciplines that may have, and frequently inevitably do have, different theoretical presuppositions and research methodologies. It then becomes truly important – as wonderfully exemplified by this volume – to build opportunities for comparison and debate, i.e. "frontier territories" where the exchange needed for the growth of shared multidisciplinary knowledge takes place. Such a sharing is essential in order to build more general and more structured theories, whose "fallout" may support the creation or improvement of practical applications or more generally increase our understanding of complex phenomena pertaining to our species.

The issue of practical application is particularly dear to me. When a student asks the Clinical Psychology professor what impact intersubjectivity research has on clinical practice, the answer is that it deals with concepts that are fundamental for the understanding of the therapeutic relationship. They are essential for building that relational field in which the sharing of meaning leading to the therapeutic alliance develops, the field supporting the client's exploration of new ways of functioning and new ways of understanding him or herself in relationship with others. In some particular studies the concept of intersubjectivity has played a crucial role, e.g. the research about autism or that about attachment. But the most relevant aspect for clinical practice is that, when the therapist is aware of her own embodied and intersubjective nature, she will read differently the client's narrative, the client's relationship with her and her own relationship with the client. This applies also to ideas, constructs and relational modalities of the client. Also the thera-

peutic techniques, such as self-description and autobiography, will have a different meaning and will be more oriented toward viable solutions.

In fact, a good theoretical model improves the use of therapeutic techniques and supports the growth of both self-knowledge and knowledge of the other. This does not just concern the clinicians, but obviously also teachers, trainers, and people operating in a group or institutional contexts or in the media. We need only be reminded of the complexity of the teacher-student relationship, or of the role of an actor in film or theatre. Generally speaking a better understanding of interactive mechanisms can benefit all those who are active in social contexts by providing new and useful conceptual tools. For this reason the present volume, with its high and clear scientific character, by also exploring the frontiers and perspectives of related disciplinary areas, can be of particular interest for a much larger public than the specialised readership.

Prof. Giorgio Rezzonico
Full Professor of Clinical Psychology
Director of the Postgraduate School in Psychiatry
Faculty of Medicine and Surgery
University of Milan-Bicocca
Milan, Italy

# INTRODUCTION

In recent years a new trend in socio-cognitive research investigates into the mental capacities that allow humans to relate to each other and to engage in social interactions. One of the mainstream is the study of intersubjectivity, namely the "mutual sharing of experiences", conceived of as a basic dimension of consciousness on which socialness is grounded. At the very heart of contemporary studies is an intense debate around some central questions that concern the nature and forms of human intersubjectivity, its development and its role in situated joint activities.

Striving to achieve a unified theoretical framework, these studies are characterized by a strong interdisciplinary approach founded on philosophical accounts, conceptual analysis, neuroscientific results and experimental data offered by developmental and comparative psychology.

The book aims to give a general overview of this relevant and innovative area of research by bringing together seventeen contributions by eminent scholars who address the more relevant issues in the field.

The book is organized into four main Sections:

Section I. Bringing forward Intersubjectivity

Section II. Perspectives on Intersubjectivity

Section III. Forms of Intersubjectivity

Section IV. Enacting Intersubjectivity

Section I introduces the study of intersubjectivity, outlining the research areas which are involved and can contribute in delineating a multidisciplinary view to the study of interactions.

Section II comprehends the essays aimed at outlining and discussing different perspectives which can be considered in the study of intersubjectivity, with a focus on conceptual and methodological aspects. Space is given to open questions, concepts to be refined and lesser explored features of intersubjectivity.

In Section III the authors focus their attention on aspects of the cognitive architecture, with the aim to understand which socio-cognitive skills are at the hearth of human interaction. Theoretical models and experimental studies concerning the central issues of the research area, such as perception and understanding of the actions of others, self-recognition and self-reflection, self-other distinction, imitation or participation in co-operative activities, are presented.

Obviously, the inclusion of the contributions in one particular section rather than in another could not be made on the basis of clear-cut criteria: each chapter is grounded on an explicit theoretical framework and frequently incorporates wideranging reflections on the adopted perspective.

Section IV responds to our wish to include studies showing how the human capacity to create an intersubjective space is enacted in ongoing interactions. Intersubjectivity is enacted for example, when a number of individuals participate to a particular joint activity which requires a specific expertise: when they play a sym-

phony, perform a choreographed dance or a piece of theatre. It is also enacted when a participant is co-operatively engaged in an experimental task. Following this line of thought we have ventured to include essays which refer to situations which are specific under other dimensions: in this case the problem can be to understand, for example, the kind of interpersonal relationship and emotional exchange, the subjective experience which can take place when people with particular diseases are immersed in everyday life events. Looking to future research, we hope that more situated studies of individuals-in-interaction, will bridge the gap between two separate research traditions, that of cognitive science mostly centered on individual capacities and that of social sciences exclusively focused on interactional behaviour.

We will now give a brief guided tour through the contents of the chapters.

The starting point of the book is the Chapter by Francesca Morganti where she provides an account of the disciplines involved in research on intersubjectivity, showing how this object of study can be derived from the cross-fertilization among situated cognitive science, social cognition and cognitive neuroscience.

The opening Chapter in *Section II* by Corrado Sinigaglia contrasts the standard view that we understand the behaviors of others because we are able to read their mental states such as intentions, beliefs and desires and develops a motor approach to intentionality based on neuroscience results regarding mirror-neurons. He shows how this approach may constitute the way to rethinking the basis and the development of intentional understanding within a unitary, theoretically and neurophysiologically grounded framework.

Starting from the question "What is a social interaction?" the article by Hanne De Jaegher and Ezequiel Di Paolo presents an enactive approach aimed at integrating individual cognition and the interaction process in order to arrive at new and more parsimonious explanations of social understanding. Their concept of participatory sense-making, connecting coordination with meaning-generation, contributes to the enrichment of the dialogue between cognitive science individualistic approaches on social cognition and social science approaches which are instead uniquely focussed on interactional behaviour.

In Chapter 4, Jessica Lindblom and Tom Ziemke contrast traditional, disembodied information-processing approaches to intersubjectivity in socio-cognitive research with more recent embodied approaches. Different notions of embodiment and their role in cognition and social interaction are clarified and a theoretical discussion on the function of the body in social interaction is conducted, integrating a broad range of theoretical perspectives and empirical evidence from the different disciplines involved in intersubjectivity research.

The contribution by Timothy Racine, David Leavens, Noah Susswein and Tyler Wereha in Chapter 5 addresses some conceptual and methodological issues in the investigation of primate intersubjectivity, in particular the primates' ability to point. They argue that the present debate about the human ability to declaratively point and the absence of this ability in other great apes, rests on problematic ideas about the nature of meaning and mind. In their view, the conception of the mind as an inner entity that is logically distinct from activity and cultural surroundings rearing history and so forth, give rise to conceptual and methodological problems that interfere with the interpretation of data and the construction of valid theories.

In Chapter 6 Maurizio Tirassa and Francesca Bosco outline a theory of agency and communication cast in a mentalistic and radically constructivistic framework and discuss the role that the capability to share plays in it.

The final Chapter of Section II, by Giuseppe Riva, presents a conceptual framework that uses the concept of "Presence" – the feeling of being and acting in a world outside us" – to link the enaction of our intentions with the understanding of other people's intentions.

In Section III different basic aspects of intersubjectivity are investigated.

In Chapter 8, Jordan Zlatev, Ingar Brinck and Mats Andrén offer a model of perceptual intersubjectivity (PI), the phenomenon of two or more subjects focusing their attention on the same external target. Support fot this model is provided through an empirical study of adult-infant interaction in two species of great apes (chimpanzees and bonobos) and human beeings.

The Chapter 9, by Stein Bråten, regards the ability of infant and adults to imitatively re-enact what they have seen being done or co-enact what the companion is doing. This intersubjective enactment is illustrated with reference to layers of intersubjective attunement in ontogeny and with a focus on infant learning by altercentric participation in what the model is doing in face-to-face situation, as if they were co-author of the model's actions. With reference to mirror neurons discovery, the neurosocial support by an altercentric mirror system is indicated.

In Chapter 10 Manos Tsakiris addresses the question of how the self can be distinguished from other people, described as "self-other distinction". Taking into account and discussing perspectives and evidences in cognitive neuroscience studies, the author puts forward the hypothesis that the experience and representation of one's body may underpin the distinction between the self and other agents.

In Chapter 11 Wolfgang Prinz gives a cognitive science perspective on social mirroring, the notion that the individuals come to perceive and understand themselves by understanding how their conduct is perceived, received and understood by others. Varieties of social mirroring, arising from different modes of mirroring and different modes of communication, are proposed by the author. For social mirroring to work, it is argued that two basic requirements must be fulfilled, a functional one – the operation of representational devices with mirror-like properties – and a social one – the discourse and practices for using and exploiting mirrors within social interaction.

Chapter 12, by Moritz Daum, Norbert Zmyj and Giza Aschersleben, addresses the controversially discussed question of how infants' abilities to perceive and understand goal-directed action is interrelated with their competence to perform the same behaviour. With the aim of contradicting results in studies on the development of this interrelation, the chapter integrates various findings in recent studies investigating perception, production and imitation of goal-directed action and discusses them in the light of existing hypotheses and theories.

In Chapter 13 Antonella Carassa, Marco Colombetti and Francesca Morganti contend that certain explanatory inadequacies of current models of intersubjectivity depend on failing to appreciate the fundamental role of normativity in collective intentionality. Basing their argument on Margaret Gilbert's theory of plural subjects, the authors try to show how the concept of joint commitment is a powerful tool in order to explain certain specific features of human joint activities and discuss some lines along which a psychology of plural subjects can be developed.

How intersubjectivity is enacted in interaction is the focus of Section IV.

Music performance is examined in Chapter 14 by Peter Keller, where the author explains how ensemble musicians coordinate their actions with remarkable precision. Three cognitive processes which enable individuals to realize shared goals when engaged in musical joint action are illustrated and the way in which these processes interact to determine ensemble coordination is discussed.

In Chapter 15 Wolfgang Prinz and Gertrud Rapinett consider how participants engaged in a specific task enact their abilities to represent partially occluded actions. To investigate if simulation, that is the representation of the events during occlusion, merely carries on old processes or initiates new ones, an experimental paradigm is used that allows one to study the impact that features of unoccluded action segments make on the representation of occluded segments. The results suggest that action simulation is a creative process creating novel, invisible actions rather than extrapolating visible actions.

In Chapter 16 Jonathan Cole refers to his extensive studies on the role of face in the constitution of self in relation to others and on the impact of this aspect on interpersonal relationship. His investigation is based on the idea of exploring the role of face by taking into account what happens when something goes wrong as in Moebious syndrome, focusing on the subjective experience of the person – in – interaction. In this sense, his work can be characterized in terms of a "first person approach" to the study of consciousness, with a primary attention on first person data as expressed in narratives.

Finally Chapter 17 by Fran Hagstrom is aimed at theoretically exploring intersubjectivity when social development goes awry, in the case of autism. The main point of the chapter is to complement the neurodevelopmental view of autism as a cognitive disorder with an investigation into the individual developmental paths of intersubjectivity in everyday life. The adopted socio-cultural framework and the analysis of a case-study material allow the author to show how intersubjectivity may be experienced differently depending on everyday situations and to develop the idea that cultural tools and social others often function to support late—emerging intersubjectivity during adolescence.

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We hope that the contents of this book will stimulate further integrated research on intersubjectivity allowing us to better understand the neurobiological foundations, cognitive architecture and social abilities which define human beings.

# **CONTRIBUTORS**

#### Mats ANDRÉN

Centre for Languages and Literature Lund University, Sweden

#### Gisa ASCHERSLEBEN

Department of Psychology Infant Cognition and Action
Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

#### Stein BRATEN

Department of Sociology and Human Geography University of Oslo, Norway

#### Francesca M. BOSCO

Center for Cognitive Science University of Torino, Italy

#### Ingar BRINCK

Department of Philosophy Lund University, Sweden

#### Antonella CARASSA

IPSC, Institute of Psychology and Sociology of Communication University of Lugano, Switzerland

#### Jonathan COLE

Department of Clinical Neurophysiology Poole Hospital, Poole, United Kingdom

#### Marco COLOMBETTI

Institute for Communication Technologies University of Lugano, Switzerland

Department of Electronics and Informatics Polythecnic University of Milan, Italy

#### Moritz M. DAUM

Department of Psychology Infant Cognition and Action Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

#### Hanne DE JAEGHER

Centre for Psychosocial Medicine, Department of Psychiatry University of Heidelberg, Germany

CCNR, Centre for Computational Neuroscience and Robotics University of Sussex, United Kingdom

#### Ezequiel DI PAOLO

CCNR, Centre for Computational Neuroscience and Robotics University of Sussex, United Kingdom

#### Fran HAGSTROM

Department of Rehabilitation, Human Resources and Communication Disorders University of Arkansas, Fayetteville, Arkansas, USA

#### Peter KELLER

Music Cognition & Action Group

Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

#### David A. LEAVENS

Department of Psychology University of Sussex, Falmer, United Kingdom

#### Jessica LINDBLOM

School of Humanities and Informatics University of Skövde, Sweden

#### Francesca MORGANTI

IPSC, Institute of Psychology and Sociology of Communication University of Lugano, Switzerland

ATN-P Lab, Applied Technology for Neuro-Psychology Lab Istituto Auxologico Italiano, Milano, Italy

#### Wolfgang PRINZ

Department of Psychology

Max Plank Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

#### Timothy P. RACINE

Department of Psychology

Simon Fraser University, Burnaby, British Columbia, Canada

#### Gertrude RAPINETT

Department of General and Developmental Psychology University of Zurich, Switzerland

#### Giuseppe RIVA

Department of Psychology Catholic University of Milan, Milano, Italy

ATN-P Lab, Applied Technology for Neuro-Psychology Lab Istituto Auxologico Italiano, Milano, Italy

#### Corrado SINIGAGLIA

Department of Philosophy University of Milan, Italy

#### Noah SUSSWEIN

Department of Psychology Simon Fraser University, Burnaby, British Columbia, Canada

#### Maurizio TIRASSA

Center for Cognitive Science University of Torino, Italy

#### Manos TSAKIRIS

Department of Psychology Royal Holloway University of London, United Kingdom

#### Tyler J. WEREHA

Department of Psychology Simon Fraser University, Burnaby, British Columbia, Canada

#### Tom ZIEMKE

School of Humanities and Informatics University of Skövde, Sweden Jordan ZLATEV Centre for Languages and Literature Lund University, Sweden

#### Norbert ZMYL

Department of Psychology Infant Cognition and Action Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

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