Introduction

Do Metarepresentation and Narratives Play a Role in Reflective Thinking?

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Reflective thinking can mean three different things. A first form of reflective thinking consists in elaborating personal conceptions about the mental activities and abilities and in becoming aware of what occurs in our and other people's minds when we are engaged in intellectual tasks. This form of reflective thinking encompasses the research field usually labeled as "metacognition." A second meaning of "reflective thought" regards Theory of Mind, which concerns more closely the realm of social interactions and relationships. Theory of Mind in fact is conceived as the recognition of one's and others' affective and epistemic mental states as the psychological causes and motives underlying behaviors. Metacognition and Theory of Mind are in part explicit and can be recognized by asking people to express verbally their beliefs about the mind; they are, however, also partially implicit, and they can be detected by observing how people behave – both in natural and in experimental settings – and speak. The third kind of reflective thinking takes the form of narration. In this case individuals reflect on their own and others' mental lives by trying to make sense of what happens within and around them. People's storytelling, on one hand, reveals their naïve psychological ideas and, on the other hand, hints at exploring and understanding their own and other persons' mental states and intentions better.

The forms of reflective thinking mentioned are seen as important competences that are needed to equip an individual to face the demands of reality. Their functional meaning appears in informal

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settings – such as spontaneous conversations and dialogues – as well as in formal contexts, such as instructional environments. Furthermore, they are shaped by interpersonal relationships and by literacy because an individual is an active partner in social exchanges, belongs to a given culture, and uses specific artifacts in which values, norms, and rules are embedded.

A reflective attitude about our own mental processes is a somewhat "unnatural" attitude. Our mind is set to understand the external reality and not to reflect on itself. The recursive process that causes the mind to focus on itself instead of the external content is the exception and not the rule in psychic activity in general. Only when there are particular difficulties or errors that we find that we have made are we led to ask questions about how we proceed and then induced to reconstruct mentally the paths we have followed or are following. This means that the request to adopt a reflective attitude is not an easy request because this attitude is not the most habitual and familiar to individuals. We must keep in mind possible resistance and failure. The consequence is that we must be prepared for a long period of assimilation and promote the motivation to be engaged in reflective operations.

Second, reflection is an individual activity that is likely to place the subject in an almost solipsistic position. There are certainly moments during the intellectual growth of individuals in which isolation and retreat into themselves are important. In response to intrusive environmental inputs, "closing" the channel of communication with the outside world and reserving space for introspection are steps that now are rarely attempted, but they are essential to preserve the possibility of evaluating, reasoning, and deciding. But we must not forget the natural inclination of the relational subject. Opportunities for sharing the results of our reflections and reconstructing the mental functioning of others can help avoid this individualistic drift. Another antidote to solipsism is the realization that sometimes reflection is developed through social interaction. Awareness about the mental processes involved in an activity sometimes results from discussion, from

conversation, or from social comparison. This indicates that much thought is actually incorporated in artifacts and technologies outside the mind. The results of the reflection on one's mental processes, in fact, find expression in artistic works and computer tools. There are paintings and sculptures that depict not only people engaged in reflective activities – thereby signalling the attitudes, even bodily (posture, muscle tension, gestures, facial expressions, etc.) that accompany such activities – but also the consequences of reflective thinking in real life. Today's technology can amplify these expressive possibilities of reflection. What people write in their blogs, chat documents, Web sites, and videos they create to share with friends very often have a reflective component as they include the expression of mental states and processes that accompany experiences of life. Reflection is not so explicit only in the intangible introspections of individuals; it is also detectable in concrete material products, which can provide interesting insights and tools for education and training.

The characteristics of reflection we have mentioned – that is, social sharing and embodiment in cultural artifacts – are well represented by narratives. Narrating is a social act not only addressed to exchanging information, but also to putting in order our experiences and giving them an inner and shared organization. By narrating – and so giving the sequence of their experiences by linking them with temporal connectives and causal relations – people give meaning to their own and others' events. As the Italian writer Alessandro Baricco stated in an interview: "The facts become your life or when you crash, directly, or when someone composes them into a story and sends them to you in the head.... The story, and not information, makes you master of your history." Narrative thinking is closely related to metacognitive reflection. When you tell a story, you are induced to make reference, implicitly or explicitly, to your own mental states (by expressing your own perspective – namely, your intentions, emotions, beliefs, and so on – on the events you are reporting), as well as to other people's mental states (their intentions, emotions, beliefs). When you begin telling

a story, you are induced to reflect about why you decided to tell such a story (what is your actual motivation?) and how you are telling that story (am I succeeding in leading my listeners to understand or in impressing, convincing, entertaining them?). Thus, reflective thinking is deeply involved in narrating.

The present book includes a series of chapters addressing different aspects of the role played by reflective thinking in educational contexts such as family, school, and university. The general framework shared by the contributors takes into account the role played by culture in fostering the acquisition of cognitive, linguistic, and social skills. The main aim of the book concerns the attempt to collect in the same volume contributions sharing the common assumptions mentioned, derived from different specific research areas, to allow readers to understand the possible intersections among these areas. Another aim is to show that the core ideas associated with reflective thinking, those resulting from the relationships between meta-representation and narrative, can be applied to different contexts and to different developmental levels.

The main objective is to highlight possible connections among fields that are usually conceived as separate, by assuming a life-span perspective and taking into account different age levels and different developmental issues. Both typical and atypical development, both intraindividual and interindividual processes, both personal and public/institutional factors were considered, and different educational settings, symbolic systems, and learning procedures were analyzed.

The contents of the volume are organized in two parts. Each part is concluded by a commentary in which the authors (respectively, Giorgio Battistelli and Jens Brockmeier together with Bruce Homer) try to consider globally the chapters of the corresponding section, finding possible threads connecting them and discussing the whole picture that emerges.

In the first part the role of representations and metarepresentations is addressed. The first chapter (Social Development and the

Development of Social Representations: Two Sides of the Same Coin?) by Felice Carugati and Patrizia Selleri tries to answer a series of questions often recurring within the approaches to the psychological development: How do children make sense of the social world? How do they represent the various exchanges that characterize the social life where they are embedded? How does their knowledge differ from that of the adults in their communities, and what is the process through which this knowledge is acquired? Development is seen as the outcome of processes of social interaction, dialogue, communication, and conversations, all leading children to reflect on their own mental and interpersonal processes. For this reason, social psychology and developmental psychology are not distinct enterprises. Moscovici's theory of social representations offers a useful theoretical framework to deal with this issue through the conceptualization of three levels in social representation development: the sociogenesis, the ontogenesis, and the microgenesis of social representation (SR). Some examples are offered as regards the level of the ontogenesis of SR (acquisition of social gender identities, representation of intelligence, and school abilities as sociocognitive tools). The process of interpretive reproduction proposed by Corsaro is recognized as a method for the integration of ontogenesis and microgenesis of children's SR within a cultural framework.

The second chapter (Learning from Multimedia Artifacts: The Role of Metacognition), written by Alessandro Antonietti and Barbara Colombo, shifts to the role of metacognition in multimedia learning. Multimedia educational artifacts incorporate cultural assumptions and implicit theories concerning the way people believe such tools should be used. Hence, structuring a theoretical framework focused on the actual role of metacognition in multimedia learning appears to be extremely relevant. The authors tried to understand which models of metacognition are mostly assumed in relation to multimedia artifacts and, more specifically, which roles metacognition has in relation to multimedia, and, finally, which effects, if any, metacognition

seems to have concerning different aspects of multimedia. The chapter highlights how studies converged on three main aspects: metacognitive knowledge, metacognitive monitoring, and metacognitive control. Furthermore, it was possible to identify three different perspectives concerning the role ascribed to metacognition: The more simple one sees technology as a tool to promote metacognition; a second perspective sees metacognition and learning as linked, and technology is here intended as a tool to scaffold this twofold relationship; the last perspective sees metacognition and technology as useful to promote effective learning if and when used together. All perspectives but one seem to record both positive and negative results linking metacognition and multimedia. The last perspective, however, appeared to be the most promising since it fostered self-reflection and self-regulation. Yet, it is important not to forget that metacognitive competence is not always necessary or advisable in multimedia learning. A metacognitive attitude has its costs and has to be used only when needed. Pros and cons of metacognition in the field of multimedia learning are discussed by taking into account that media use always occurs within a cultural context, and so cultural meanings associated with the multimedia tools cannot be neglected.

The third chapter (Theory of Mind in Typical and Atypical Developmental Settings: Some Considerations from a Contextual Perspective) by Antonella Marchetti, Ilaria Castelli, Giulia Cavalli, Eleonora Di Terlizzi, Flavia Lecciso, Barbara Lucchini, Davide Massaro, Serena Petrocchi, and Annalisa Valle discusses the more recent theoretical perspectives on Theory of Mind development. From a sociocultural perspective it considers the most innovative contributions available in the scientific literature on Theory of Mind, exploring both typical and atypical contexts of development and education. In particular, the first part of the chapter is dedicated to typical settings and focuses attention on those aspects of development that seem to "contribute to" and/or "accompany" Theory of Mind in terms of precursors as well as interacting abilities. In this sense it discusses the link

between Theory of Mind and attachment in familiar and scholastic settings of caregiving and the role of pretense and language in specific relational contexts. The second part of the chapter deals with the atypical development, considering the case of autistic and deaf children, who represent two of the most challenging fields of investigation as regards the topics of deviance versus delay in Theory of Mind development. Finally, the last part of the chapter is about the most recent frontiers of this area of research, which in the employment of highly sophisticated technology (for example, brain imaging) constitute the next step for new insights on Theory of Mind development.

The subsequent contributions included in the first section of the book report the results of experimental studies. The fourth chapter (The Use of Metacognitive Language in Story Retelling: The Intersection between Theory of Mind and Story Comprehension) by Janette Pelletier, Kathleen Hipfner-Boucher, and Antoinette Doyle is focused on the types of adult-child interactions that support the development of early literacy and is aimed at clarifying the relationships between these interactions and reading and writing outcomes in school. Narrative competency, a component of emergent literacy generally measured in terms of storytelling ability, has been the subject of investigation by researchers attempting to elucidate the relationship between the preschooler's skill in interpreting and producing narrative accounts and later reading comprehension. In the past decade, Theory of Mind development and narrative comprehension, as intersecting processes, have become an area of increasing interest to researchers in both fields. In this chapter, the Theory of Mind achievements of typically developing kindergarten children are considered in relation to the transactional processes of meaning making in storybook reading experiences. This chapter shows that four- to six-year-old children bring social understandings to storybook-based interactions in order to construct meaning actively from text and that these understandings are manifested in their appropriate use of metacognitive language. The findings of a cross-sectional study aimed at investigating kindergarten

children's production of mental state verbs in a story retell task are presented and discussed in terms of their relation to concurrent measures of narrative comprehension. Implications for educational and instructional practices are discussed as well.

The last chapter of the first part (Language Access and Theory of Mind Reasoning: Evidence from Deaf Children in Bilingual and Oralist Environments) was coauthored by Marek Meristo, Kerstin W. Falkman, Erland Hjelmquist, Mariantonia Tedoldi, Luca Surian, and Michael Siegal. The investigation reported in this chapter examined whether access to sign language as a medium for instruction influences Theory of Mind reasoning in deaf children with similar home language environments. The first experiment involved ninety-seven Italian deaf children aged four to twelve years: Fifty-six were from deaf families and had Italian Sign Language as their native language, and forty-one had acquired Italian Sign Language as late signers after contact with signers outside their hearing families. Children receiving bimodal/bilingual instruction in Italian Sign Language together with Sign Supported and spoken Italian significantly outperformed children in oralist schools where communication was in Italian and often relied on lipreading. The second experiment involved sixty-one deaf children in Estonia and Sweden aged six to sixteen years. On a wide variety of Theory of Mind tasks, bilingually instructed native signers in Estonian Sign Language and spoken Estonian succeeded at a level similar to that of age-matched hearing children. They outperformed bilingually instructed late signers and native signers attending oralist schools. Particularly for native signers, access to sign language in a bilingual environment may facilitate conversational exchanges that promote the expression of Theory of Mind (ToM) by enabling children to monitor others' mental states effectively.

The second part of the book addresses the topic of narrative thinking. It is introduced by a chapter (Narrative, Culture, and Psychology) by Jerome Bruner. In this contribution it is argued that psychology seeks to understand the human condition, but the latter is not easily

understood. The human condition is shaped both by the biological constraints inherent in our nature and by the symbolically rich cultures that we humans construct and in terms of which we live our lives communally. Humans are both constrained by our biology and liberated from it by the cultures we create to actualize "possible worlds." Humans are also limited by what we might call the intrinsic constraints of culture. Even when we ignore biological constraints, the human condition, viewed culturally, is an endless dialectic between the already Established and what we imagine to be Possible. This perpetual compromise between the already Established and the imaginatively Possible both generates human troubles and, at the same time, provokes human creativity. The challenge of life is to find a viable compromise between the Established and the Possible. This challenge shapes how psychology goes about or should go about its business in researching the nature of man and his condition. Psychologists should learn that to understand human behavior you should take account of the historical compromise that always exists between the Established and the Possible. We have come to recognize that both Piagetian and Vygotskian approaches are needed in a properly balanced psychology – especially in developmental psychology. And increasingly we are becoming aware of how important it is to take both perspectives into account: our attachment to the Established and our search for the Possible.

These issues are further elaborated in the subsequent chapter (Schooling and Literacy in Mind and Society) by David Olson. In this chapter it is argued that learning to read and write is to discover something about one's spoken language. Literacy contributes to making speech and language into objects of explicit knowledge. Making knowledge explicit is the links among literacy, schooling, and society. How this could be so is the focus of this chapter. Literacy is instrumental in formalizing knowledge and practices in terms of known, explicit rules that can be more or less mechanically applied by anyone trained in the use of those rules and procedures; residual ambiguity is resolved

by courts and panels. Bureaucracies are the social systems that result from the application of these principles to complex social goals and problems. They allow the possibility that complex tasks can be dissolved into established rules and procedures carried out by persons trained to play particular roles. These explicit rules and procedures apply not only to the society but to the mental lives of individuals. What the chapter argues is that the institutions of a bureaucratic society are themselves literate institutions. Bureaucracies not only use literacy; they embody the very practices of literacy, practices described in terms of explicit rules and procedures. Thus, literacy plays a role not only in consciousness of language and consciousness of mind, but also in the explicitness of arguments, the uses of evidence, and the forms of discourse appropriate to such specialized institutions as economics, law, science, and literature. A literate society is one that is both societally literate, having in place the infrastructure for the systematic, bureaucratic management of social affairs, and personally literate, composed of a citizenry with the knowledge and willingness to participate fully in these governing institutions. Schools, through their literate activities, provide a bridge between these two.

The third chapter (Teaching Writing to Undergraduate Psychology Students as Socialization to a Genre) by Pietro Boscolo starts by stressing that writing a dissertation or thesis for a graduate degree (M.A.) in psychology is a demanding task for graduate students, who have to use their knowledge and writing skills in a way quite different from high school compositions – in fact, they have to learn a new genre. In this chapter, students' progress and difficulties in their socialization with a new genre are analyzed and discussed on the basis of the author's experience of teaching academic writing to psychology undergraduate students. When learning to write a dissertation, students have to deal with three levels of difficulty. The lowest level regards the structure of the dissertation, which can be a report of an empirical study or a critical review, and must be written according to the rules and norms of the international psychological community. The second level of difficulty