Report

# Summer School on *The Social Self*

Alghero, 20-27 September 2009

*Chiara Brozzo*

Between 20th and 27th September 2009, the Faculty of Architecture in Alghero (University of Sassari) hosted a one-week interdisciplinary summer school, "The Social Self", on the contemporary research on philosophical and psychological models as well as neural mechanisms underlying the sense of the self, shaped through the intersubjective experience. This summer school was organized by Prof. Fabio Bacchini (University of Sassari), Prof. Vittorio Gallese (University of Parma), Dr. Ludovica Lorusso (University of Sassari, Ph.D), Prof. Corrado Sinigaglia (University of Milan), Prof. Silvano Tagliagambe (University of Sassari), and brought together major figures in philosophy, psychology and neuroscience.

Vasudevy Reddy (Portsmouth University) in "Engagement and awareness in infancy" explored the concept of the social self under the viewpoint of developmental psychology, concentrating on the sense of the self as it emerges at early stages of human life. She described the ways in which an infant relating to her own parents starts building up the sense of the self and others, for she argued that to understand the self we have to understand awareness of others. She described the development of attention and engagement, both from and towards others, and the strategies for engaging with others such as playful teasing. She then widened the focus of this study so as to include a reflection of culture, which exist at a dyadic level as well as at large group levels, and emerges through engagement.

Natalie Sebanz (Radboud University) focused on "The social self in interaction", and gave an analysis of that under three different viewpoints: conceptual level, perceptual level, and motor level. The conceptual level analysis was concerned with thinking about self and other, and this discussion included a reference to the contrast between Theory Theory and Simulation Theory. The perceptual level discussion was essentially about shared action planning, and Sebanz illustrated a series of experiments meant to suggest that a person's perception and reaction times when performing a task do change as soon as another's contribution to that task has to be taken into account. Finally, the motor level discussion was about shared motor control.

Barry Smith (Institute of Philosophy, University of London) in "'Sharing the moment but being alone': the extent and limits of social cognition" sought a correct philosophical approach to the concepts of self and others. The Cartesian view, according to which acquaintance with our own mind provides a basis for knowing others' minds, was rejected as it is not clear what the source of our concept of the self would be in that case. Similarly, both Simulation Theory and Theory Theory were criticized on the grounds that they presuppose the perspective of the self. An alternative solution called "Folie à deux" was then proposed, and described in terms of a default identification of own states with others'.

José L. Bermùdez (Washington University) in "The social self in philosophy and psychology" proposed a taxonomy of different sorts of mindreading, starting with the simplest form, which is a form of social coordination in the animal kingdom that involves a sensitivity to the psychological states of other participants in interaction. While this falls in the category of the so called *minimal* mindreading, there are more sophisticated forms of mindreading qualified as *substantial* mindreading. One example of the latter consists of propositional attitude mindreading, which requires:

(a) Attributing propositional attitudes
(b) Explicitly representing the agent's background psychological profile
(c) Reasoning about how (a) and (b) might jointly issue in action.

Georg Northoff (University of Ottawa) in "The self: neuroscience and neurophilosophy" explored the link between the sense of the self and reward on the one hand and the self and emotions on the other hand under the neurological viewpoint, by discussing the role played in this context by midline cortical structures in the brain. Self and emotions are related to each other. Self-relatedness increases in depressed patients as opposed to healthy subjects. That translates in terms of abnormal (positive) correlation of subcortical neural activity with self-relatedness in depression. In schizophrenia, exactly the opposite is observed, namely a decreased sense of the self.

Rebecca Williamson (University of Washington) presented "Imitation and the social self: social cognition and learning in childhood", written with Andrew Meltzoff (University of Washington), on the development of the sense of the self in children, with a focus on imitation. Humans, perhaps uniquely, imitate others' behavior, and this is adaptive. Children imitate body movements, outcomes, exact means. Imitation is a social mechanism that allows children to connect to other people, therefore has a role in establishing cultural, cognitive, and social processes. Experiments were reported showing how imitation is related to (i) the understanding of a goal, (ii) prior experience of self and other (which influences imitation), (iii) the role of intentional demonstrations (which promote imitation).

Salvatore Maria Aglioti (University La Sapienza - Roma) in "Flesh made soul: bodies in the brain" presented different varieties of the disruption of the sense of the self under the neurological viewpoint, including cases of disownership of one's limbs. Representation of bodies is distributed over the brain. For instance, the extrastriate body area is involved in coding bodily parts (visually and somatically), but not other objects. There are studies showing that this area is also active when you observe moving people. Aglioti also illustrated the rubber hands and the full body illusion, as well as the so called "enfacement" (a photograph of your face is slowly turned into a photograph of someone else's face by a computer programme), which may be thought to challenge the sense of the self.

Jessica Hobson and Peter Hobson (University College London) in "Self/other relations in autism: imitation, communication and social emotions" took the topic of the self into developmental psychology, by discussing the sense of self and other in autistic children through the disruption that autism brings into engagement towards the other. Empathy is to "feel for" the other person, so when another person is for instance in distress, you feel some sort of distress too. The Hobsons' hypothesis is that children with autism lack empathy so conceived. To lend support to this, a study has been carried out to test how much concern is shown by children in a situation of potential distress. Among control participants, concern was manifest in a combination of expressions and actions. This pattern of relatedness was relatively absent among participants with autism: children with autism usually do not show any concern / surprise. This suggests that children with autism have a relative lack of person-related organization to their affective states.

Kim Sterelny (Wellington University) in "Evolution and the sociocultural species" explored the self/other relation through an analysis of the evolutionary mechanisms underlying the transmission of culture. Creatures become different because of forms of dynamic feedback, and that is thought to of key importance to the general problem of understanding human behaviour. Sterelny focused on the processes that lead to the establishment of distinctive features of human social learning. Transformation has been so rapid and intense that some

form of feedback learning is needed to explain it. Most competences that we show often involve extensive use of information. Too often we're able to cope with novel challenges, and our capacity to respond to them involves a special relation to information flow.

Matteo Mameli (King's College London) took further Sterelny's discussion by focusing on the transmission of cultural values in terms of natural selection, for it has been suggested that statistical methods traditionally used in biology for the study of genes could be employed to study the transmission of language and skills. We want to know whether something like natural selection, which explains adaptive change on random genetic modifications, may also explain cultural change. This idea was supported through the exploration of different processes. One is to be found in groups where information is shared to do better against threats. Hence you have group reproduction, and increased fitness of a particular group. Another process is one in which natural selection is generated by differences in fitness between cultural variants – one example is memes.

Vittorio Gallese (University of Parma) in "Social self and mirror neurons" illustrated the role of mirror neurons in providing the basis for social interaction by being essentially linked to goal-related actions. In the ventral part of the pre-motor cortex, what we call area F5, there are neurons that activate when an action (movement with an aim) is performed, and that are sensitive to the different aims (see Rizzolatti et al. 1988). No matter how the movement is performed, the pattern of activation remains the same if the aim is the same. So these neurons implement a goal representation whose content is both intentional, because it is a *goal-centered* motor representation, and motor, because the aim is mapped in *motor terms*. Also, the link between empathy and mirror neurons was explored. An experiment through fMRI recording was reported to show that the species of the actor performing a certain action matters to the activation of different brain areas. The conclusion would be that when we look at the face of a conspecific expressing a certain feeling, empathy is possible, but this happens less and less when we it's about species which are farther away from our own one.

Shaun Gallagher (University of Central Florida) in "Primary intersubjectivity" argued that the self is to be studied in developmental terms, as the beginnings of primary intersubjectivity run along with certain aspects of the minimal self. As we perceptually pick up information about the environment and about others, we are given information about ourselves. Interaction theory was presented by Gallagher as a viable alternative, one which rejects the Cartesian idea that other minds are inaccessible and makes a strong appeal to the kind of interaction that happens in primary intersubjectivity. Gallagher pointed out that Theory Theory and Simulation Theory, however, don't necessary exclude primary intersubjectivity.

Gregory Currie (University of Nottingham) discussed the self as a point of view as it features in narrative in terms of a narrator. The narrator enjoys some sort of double perspective on the action, which becomes particularly interesting when author and character being spoken about are connected in some special way. The time of the narration and the time of the events which are narrated are different, the narrator knows more at the time of narration than at the time narrated. The point of view to which we are orientated is the point of view of the narrator, so, we may conclude, narrators are more than simply informants: they may express a point of view, which influences our own; through mechanisms of imitation, we may come to experience the story as something we attend to jointly with the narrator. Narrators may also place us in close relations to the points of view of characters, by exploiting the same imitative mechanisms.

Also, an opportunity to present a short paper was given to the participants Giulia Battilotti (University of Padova, Italy), Anna Bortolan (University Vita-Salute San Raffaele, Milan, Italy), Massimiliano Cappuccio (University of Stirling, Scotland; University of Bentley (Massachusetts), USA), Sanneke de Haan (University of Heidelberg, Germany), Nevia Dolcini (University of