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Mindreading and Empathy

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█ **Abstract** This paper discusses Marraffa's essay *Mindreading and Introspection* with regard to his views about (a) the presumed difference in the genealogies of mindreading (the capacity for reading others' mental states) and introspection (the same capacity turned on one's own mind) and (b) the faculties entailed in both processes. Contra Marraffa, ontogenetic and phylogenetic arguments will be provided to argue for a common innate and modular origin of both processes (but the ontological and functional priority of third-person mindreading will be recognized). Furthermore, the theoretical and inferential nature of human psychological processes will be discussed in order to describe them in a way that more adequately accounts for the complexity of the innate and acquired features of the human being.
KEYWORDS: Mindreading; Introspection; Empathy; Theory of Mind.

█ **Riassunto** *Lettura della mente ed empatia* – Questo articolo si propone di discutere alcune tesi sostenute in *Mindreading and Introspection* di Massimo Marraffa. Esse vertono sia sulla distinzione genealogica del mindreading (o abilità di lettura degli stati mentali altrui) rispetto all'introspezione (la stessa abilità volta su se stessi) sia sulle capacità implicate in entrambi i processi. Si sosterrà, contrariamente alla tesi dell'autore, la comune origine innata e modulare di entrambi i processi, in base ad argomentazioni di tipo sia filogenetico che ontogenetico, pur ammettendo la priorità ontologica e funzionale del mindreading in terza persona. Inoltre, la natura teorica ed inferenziale dei nostri processi psicologici sarà discussa in modo da fornirne una descrizione più adeguata a rendere conto delle complesse prerogative, innate e acquisite, della nostra natura di esseri umani.
PAROLE CHIAVE: Lettura della mente; Introspezione; Empatia; Teoria della mente.

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IN THIS PAPER I WILL discuss some claims made by Marraffa in his article. I agree with his fundamental idea of the evolutionary, functional and developmental priority of mindreading compared to introspection. Nonetheless, assigning the two a different ontological status seems like a questionable move. According to Marraffa, mindreading – that is the reading of mental states from a third-person point of view – is innate and is embedded in the modular architecture of cognition. On the other hand, introspection is the outcome of social communication between the child and the adult caregiver.

A distinction must be made, however, between process and content. With regard to

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process, introspection exploits mindreading capacities and applies them to itself, but it does not seem «less "neurocognitively guaranteed"» than mindreading.[1] Here introspection is understood in its basic sense as the introspective recognition of the presence of the virtual inner space of the mind and should be distinguished from the concept of "social identity".

I would argue that this basic process is derived from the same cognitive processes that shape mindreading. From an evolutionary point of view, the construction of a mature concept of self is not simply a later development in temporal terms: it also requires much more sophisticated cognitive capacities, such as the linguistic capacity, which is crucial to one's own biographical self-description.

Marraffa argues in favor of the inferential nature of both capacities and stresses the defensive and markedly socio-constructivist character of introspection. This view is convincing and enlightening (and is also supported by a large amount of experimental evidence). It represents a significant effort to bridge the cognitivist and psychodynamic traditions, whose mutual epistemological engagement is made possible by the adoption of a genuinely naturalistic perspective (conceived as the framework of contemporary cognitive science).

The evolutionary scenario that will be examined supports Marraffa's innatist-modularist view of mindreading. Such a scenario suggests that in order to best interpret the relation between attachment systems and mindreading, the two should be regarded as independent modules. They have the same precursors and refer to prosocial tendencies, some of which are common to both human beings and non-human primates.

This last claim concerns the way in which mindreading works, both in the first and the third person. The two main approaches are "theory-theory" and "simulation theory" (these are actually two families of approaches, since each one is articulated in various theoretical ways). Theory-theory describes the interpretive process of one's own and others' mental states as the application of a theoretical and conceptual apparatus, which is the range of general psychological laws driving our folk psychology.

Simulation theory affirms the existence of two different mechanisms. The first is a simulative one that allows us to interpret other people's behaviors and intentions from a third-person point of view, by taking on their roles. The second is an introspective mechanism granting direct access to our own mental states. Marraffa endorses the point of view of theory-theory, since it seems more apt to account for the complexity of the processes underlying our social cognition.

The view I would like to argue for, in line with K.R. Stueber's remarks,[2] is that both paradigms present an "abstract" picture of mental processes, because they do not take into account some important potentialities and dispositions, both innate and acquired, that are peculiar to human nature. Marraffa claims that interpretive psychological processes are mechanisms triggered by information about mind-external states of affairs, i.e., the subject's behavior and the situation in which it occurs with respect to which the subject enjoys no particular epistemic authority.

Of course, if the subject's particular epistemic authority is to be deduced by means of some theory of direct access to one's own mental states, then I agree with the view that the subject does not enjoy any particular epistemic authority at all. However, to provide just one example, the reading of someone's behavior in relation to the context in which it takes place requires a "relevance theory" that must be taken into account. It is necessary to evaluate which elements of a context must be regarded as relevant (i.e. the subset of beliefs that we judge meaningful in order to explain a person's behavior). Such a capacity is a human feature that cannot be formalized into a general theory (at any rate, no one has succeeded in formalizing it so far).

A limited view of our mental processes is also entailed by the idea that our folk psychology is constituted by a set of general psychological theories aimed at recognizing the causes of people's behavior. Stueber rejects such an idea, since human psychology is not limited to explaining the causes of behavior. Human psychology will also detect the motives that constitute the subjective or objective reasons for a given behavior. This detection is always made from the agent's point of view.

Another's perspective only becomes intelligible through a simulative process, such as the empathic one. Empathy has an inferential and theoretical character, but at the same time allows one to take another's point of view by considering his/her cognitive, affective and evaluative motives. However, Stueber clearly states that empathy is the only mechanism that enables the mentalization process from an epistemological point of view. Reasons are recognizable as such since they are affectively marked and related to a set of values that steams from both our biological and cultural roots and our personal history. They have a strong socio-constructivist character, but such a character must be evaluated within the broader framework of those features which make us human, given the genesis and nature of the mentalization process.

Phylogenesis and mindreading

Folk psychology – that is the capacity to explain and foresee one's own and others' behavior in terms of mental states – shapes our social behavior just like our perceptual faculties guide us in the physical world. It is a universal and transcultural mechanism – a mostly automatic and heuristically powerful one.

Our everyday practices as "mind-readers", which may be more or less sophisticated, ordinarily work and allow us to interpret and communicate our own and others' feelings and intentions. They allow humans to adapt to living in complex social contexts (although sometimes they fail to prevent us from making big mistakes!). This mechanism is so powerful and pervasive that it may be extended to include the behavior of non-human animals and also abstract shapes on a screen. Social psychology experiments show how the movements of these forms are interpreted anthropomorphically.[3] From an analysis of these features as a whole, it may be affirmed that the mindreading capacity was selected by the mechanism of evolution because it enhanced the fitness of our hominid ancestors in the Pleistocene.

According to the "social brain" hypothesis, life in progressively complex and crowded social groups is a selective pressure promoting increasingly sophisticated cognitive functions. Life conditions favor those individuals with "social intelligence". This hypothesis is also confirmed by the fact that social intelligence is not an exclusively human capacity, since it is shared by non-human primates that are phylogenetically close to *Homo sapiens*.

These species exhibit forms of "Machiavellian intelligence" that are used to understand others' intentions, or at least their goals, in order to gain personal advantages.[4] Machiavellian intelligence is also exhibited through "tactical deception" behaviors. Among primates the most complex species from an evolutionary perspective live in large groups and this fact is correlated to the process of encephalization, that is to the steady increase of brain volume as a response to selective pressures demanding increasing computational resources.

It is likely that the social context is the most important selective pressure in the evolutionary path towards mindreading. It must be remarked that from a Darwinian point of view the term "complexity", both in intraspecific and interspecific cases, does not entail any value judgement. The most complex ("higher") cognitive capacities are not a better product of evolution compared to less complex ("lower") capacities. Here the use of the adjective "complex" simply refers to the degree of behavioral flexibility granted to an individual by a cognitive capacity in his/her

own ecological niche. Such flexibility increases in proportion to the independence of a behavior from the agent's genetic program.

From a phylogenetic perspective, an interesting hypothesis is put forward by Michael Tomasello,[5] who introduces an important distinction in relation to the motivational macrosystems of competition and cooperation (which are regarded as complementary and equivalent by Marraffa). According to Tomasello, the driving force of human cognitive capacities (not only mindreading) is not just the complexity of social relations but also the particular shape they take. Human sociality is characterized by cooperation and sharing, while competition and agonistic interactions prevail in the social life of other primates.

Collaborative interactions demand a far more sophisticated level of communication than competitive interactions (such as those for food or mating) for collaboration requires the coordination of behaviors and intentions towards shared goals. According to this perspective, whereas apes read others' intentions for instrumental purposes, that is, for individual goals that might represent an advantage for the group only incidentally, human beings are naturally motivated to cooperate with others towards a shared goal. Sharing promotes flexibility and attention to alternative points of view, which allows for what Tomasello defines as a "bird's eye view" of interactions with others. Such interactions are characterized by mutual expectations that favor recursive mindreading.

In this practice one's point of view is modelled after that of others and both are aware of this attunement. The hypothesis of a prior role of the cooperative systems has many important consequences both on the phylogenetic and the ontogenetic level. Furthermore, it must be noted that this hypothesis contributes to promoting a concept of human nature more consistent with a genuine Darwinian view (as opposed to the various fallacious interpretations of Darwinian theory in terms of social Darwinism). The concept of cooperative system allows one to

appreciate both the continuities between apes' and humans' capacities and the specific features of *Homo sapiens*. It also highlights the prosocial (and not just relational) quality of human nature.

This also explains complex cognitive capacities that are distinctly human such as mindreading and language. Also, according to Simon Baron-Cohen, the prerequisite for a theory of mind module is the capacity for shared attention, which allows two individuals engaged in communication to focus their attention on the same object.[6] That module would have developed from a set of abilities, a sort of hierarchically organized system of modules which generated the theory of mind module.

Such abilities are innate and implemented through non theory-based mechanisms working in a perceptual-like way. These are: the "detector of gaze direction" (that automatically detects eye-shaped stimuli) and the "intentionality detector" (reading others' behaviors in terms of goal-directed actions). Unlike human babies, for example, young apes will focus their attention on head movements rather than on the direction of the gaze to spot the object of interest for another individual. As a matter of fact – as Tomasello remarks – *Homo sapiens* is the only species with the white eye sclera, a feature that has been an evolutionary advantage since it makes one's intentions more evident.[7]

This evolutionary preamble is useful in two respects. First, it makes it possible to envisage a scenario that is consistent with Marraffa's basic tenets. More specifically, I am referring to the innatist and modularist view of mindreading as a capacity selected by evolution thanks to its advantages for social life. I am also referring to the functional priority of a third-person perspective in the reading of mental states (which is equally justified from an evolutionary point of view). Secondly, from an epistemological point of view it is important to stress the need to always investigate mind-related topics through an evolutionary and relational approach, that is, by

looking at human beings as complex systems. This is the dominant trend in today's cognitive science, whose task is to collect all the contributions from different disciplines committed to investigating the mind.

Currently, neo-Darwinist arguments and appeals to systemic and relational approaches (i.e. in developmental psychology) are popular. Nonetheless, a number of experimental studies show that both these styles of thought are deeply counter-intuitive and that their practice requires constant critical training (and this is proof of the fact that evolution also selects less than perfect, non-designed mechanisms with limited purposes, such as our common sense psychology).[8]

The traditional contrast between nature and culture is exemplary in this respect, as it reflects a misunderstanding both of the Darwinian perspective and of the relational approach. In general, it may be said that this contrast is not justified. From a Darwinian point of view, cultural processes are products of human biological nature whose limits and possibilities shape our learning capacities. Therefore, a fruitful research method cannot avoid analyzing the complexity of the relations affecting the phenomena under investigation and shaping their genealogy and features.

Ontogenesis and mindreading

According to the evolutionary framework explained above and the consequent innatist-modularist conception of mentalization, the relationship between the mindreading system and the attachment system may be rooted in our innate inclination to prosociality. These inclinations could be precursors and triggering factors for both modules. Already in the womb, the fetus exhibits a set of capacities that make it possible for it to establish a reciprocally regulating relationship with the environment, and not just at a physiological level. Afterwards, through the progressive development of its perceptual system, the fetus can learn from experience, as shown by

experiments testing the habituation paradigm with regard to learning capacities in the prenatal period. Newborns have recognition memory and show preferences linked to their mother's smell and voice (as well as stories heard during the prenatal period).

Andrew Meltzoff and Alison Gopnik have conducted some important research on early facial imitation in newborns, a phenomenon former psychological research regarded as a later developmental achievement.[9] Andrew Meltzoff and Keith M. Moore have shown that 12-21 day-old infants imitate tongue and lips protrusion and mouth opening.[10] Facial imitation is peculiar since it happens without the baby making a direct visual comparison between his/her own face and the adult's. For this reason the authors hypothesize that newborns have the innate capacity to detect the transmodal equivalence between the visual perception of another's face and the proprioceptive experience of their own facial movements.

Furthermore, when faced with two interacting adults, 14-month old babies are able to spot the one who is imitating them and will show a preference for him/her. This research reveals that newborns can detect the correspondence between their own actions and those of others. According to the authors of the study, early facial imitation is notable with respect to the development of theory of mind since it represents the first example of infants' innate capacity to link their internal states to visible reality. It is the ground of early empathic relationships (whereas "empathy" is defined as the innate mechanism that allows the interpersonal communication of emotional states from the caregiver to the child).

The hypothesis is that the reproduction of a facial expression causes a given mental state and the corresponding physiological reactions. It may be supposed that this basic form of empathy is grounded on some kind of mirroring mechanism that is empirically confirmed by the mirror neuron system. These neurons would be activated through the same discharge patterns both when the sub-

jects watch an action and when they personally perform an identical action. The action would be immediately perceived as a means to achieve a goal. The same mechanism of direct perception also concerns the recognition of the facial expressions for some basic emotions, such as fear and disgust, or sensations, such as feelings of touch and pain.

These empirical data are a valuable source of knowledge but they can also be interpreted in controversial ways. While setting out from very different positions with regard to the mechanism underlying our capacity for mindreading, some authors – such as Meltzoff and Moore or Alvin Goldman – claim that the mirroring mechanism acts like a kind of inferential process that allows the subject to ascertain that another individual is similar to him/her. Such a view entails that the infant is able to consciously evaluate his/her own internal states (and also to distinguish, reproduce and attribute them to others) and possesses a fully developed conception of self (for in order to say that another is like me I must already have the concept of "me"). In Goldman's case, this would happen through a simulative process involving the hypothesis of a direct access to one's own mental states, which has already been discussed and refuted by Marraffa. Goldman's view can further be criticized on the basis of the anti-Cartesian argument against analogical inference: for if direct access to my own mental states is guaranteed by first person phenomenological experience, it is difficult to understand how my mental states might serve as a model through which to infer those of others. If the mirroring mechanism is interpreted in a strong relational fashion, the process is not a unidirectional one, from the simulator to the target.

On the contrary, mirroring is built upon a shared perception-like space whereby the meaning of one's own actions and some phenomenological experiences are immediately accessible to others and vice versa. Such basic and unconscious simulative processes are affective, motoric and sensory. They may be seen to constitute a primary form of mindreading, which should be guaranteed both in the first and third person – contrary to Marraffa's view. Here I am discussing the process itself, not its content. With regard to the concept of introspection, symmetrically to mindreading, Marraffa himself argues in favor of two different levels: introspection as the unaware acknowledgement of the existence of an inner virtual mind-space and introspection as the capacity that drives the building of self. Here I am discussing the first level, which seems to coincide with the stage of development defined as the "social self" by György Gergely and John S. Watson.[11]

The understanding of the self as a social agent relies upon the infant's species-specific sensitiveness to the vocal and facial expressions of the caregiver and upon his/her innate propensity to engage in affective interactions with this person. According to Gergely and Watson, the baby possesses a "contingency detection module", an innate mechanism that makes him/her specifically reactive to the relations of temporal contingency between his/her own physical actions and the consequent environmental events.

At about three months of age such a module would be tuned to the high, although not perfect, contingency correlations that are typical of social interactions. Gergely and Watson build "the social biofeedback theory of parental affect-mirroring" upon this idea. The repeated experience of contingent affect-mirroring of the baby's emotional expressions by the caregiver constitutes a kind of feedback that conveys to the infant information about his/her own mental states through a gradual sensitization process. Therefore earlier forms of introspection may appear in the period between three and nine months as differential schemes of visceral and physiological activation linked to the expression of specific emotional states by the infant.

These schemes are made salient by the caregiver's contingent affect-mirroring. Empathic mirroring fulfills two functions. First, it modulates the infant's emotions (mostly

negative ones), regulating and restraining them. Second, it promotes the later development of secondary representations of the baby's primary, procedural and unconscious, emotional states, by means of the introjection of the caregiver's affect-mirroring expressions. According to Gergely and Watson, these secondary representations are the cognitive tool needed to access one's own emotional states and attribute them to others. This idea is consistent with Marraffa's claim that the capacity for introspection is the outcome of the cooptation of the capacity of reading others' minds and its application to oneself. In this respect, introspection has a markedly socio-constructivist character.

Mindreading and empathy

Although I agree with Marraffa's view about the inferential nature of first and third person mindreading, I would argue that his account of human capacities is not complete. In particular, I would like to discuss the idea that the mentalization process is driven by theories elaborated from "external states of affairs" (the agent's behavior and its surrounding context) as well as the notion that the subject does not enjoy any particular epistemic authority with regard to that process.

First, it is important to stress the role of the mirroring processes described above. They entail direct sharing without the use of theories and they are proper acts of simulation. They may be defined as forms of basic empathy, a pre-linguistic and pre-conceptual mechanism that allows subjects to detect, even unconsciously, that they and someone else have the same mental dispositions. This detection is triggered by specific behavioral displays, as in the case of the communication of emotions by means of facial expressions. It is an early, basic form of relational communication and sharing of information and meanings. For this reason, empathy may be seen as the foundation of Tomasello's "*common ground*", that is the pieces of biologically and culturally originated knowledge we share

with one or more individuals (emotions, beliefs and evaluations). Such a ground allows us to build a common semantic network, which is a world of shared meanings.[12]

The common ground is both the precondition for and the means for communicating, learning and reasoning in terms of folk psychology. During its development it initially consists in the exchange of feelings and emotions. Afterwards it allows us to direct others' attention to objects of common interest. Finally, it makes shared intentional states possible and incorporates cognitive, affective and evaluative features. In communication empathy has both cognitive and social roles. From a cognitive point of view, it allows the subject who receives a message to identify his/her interlocutor's intentions, which is what in the context is interesting to the interlocutor. From a social point of view, empathy makes the motives of that interest intelligible. Therefore, generally speaking, building common ground is not a process based on theory-based mechanisms but rather on recursive mindreading (a kind of reading that sometimes is also promoted by empathy itself). The communicator and the receiver engaged in communication share common knowledge – and are aware of sharing it.

Hence, the communicating person expects the other to infer what feature of the context is relevant, while the latter knows that the communicator expects him/her to know what the interesting part of the context is from his/her point of view. The two individuals establish a web of cross-references and mutual expectations. This shared knowledge is created by (and in turn contributes to increase) a shared semantics that makes it possible to solve the so-called "frame problem", that is the problem of understanding what is relevant to others and why.

The meaning of someone's behavior or belief is interpreted within a context of behaviors or beliefs ascribable to him/her and that are deemed relevant for interpretation (given that it would not be possible – or indeed economical or heuristically sensible – to

examine a whole system of beliefs). It is a ho-listic process driven by a relevance criterion that cannot be formalized in a theory.[13] Therefore, our folk psychology is based on a principle of practical choice making that steers our interpretation of others' mental processes by selecting a framework of rele-vant assumptions (provided that a certain amount of true beliefs about the world are shared and that these are organized accord-ing to a basic principle of consistency).

We constantly attribute meanings to oth-ers' actions and our own, making correct guesses in the majority of cases. In other words, folk psychology works because human beings solve the frame problem even without any relevance theory. Therefore it seems in-correct to conclude that meanings are at-tributed to others' actions only by means of a theory of mind-external states of affairs, as argued by Marraffa. Also, it is not possible to describe the processes and contents of our folk psychology as mere detectors of the causes of our behaviors.

From these premises Stueber elaborates the concept of "reenactive empathy", that is the capacity to reproduce the thought pro-cesses of others, in terms of action-motivating reasons (and not just causes of behavior) from the point of view of the oth-er. This simulative process allows the inter-preter to understand the particular reasons motivating an agent's behavior. It cannot be described as a simple direct mirroring pro-cess unrelated to the subject's set of beliefs (as proposed by simulation theorists), nor as a merely theoretical process (as stated by theory-theory supporters). Understanding human behavior in complex social situations must imply the knowledge (and use) of con-cepts such as desire and belief and of the pos-sible interactions between the various kinds of mental states.

The question is to what extent such gen-eral knowledge is necessary and sufficient to understand others' minds. According to Stueber, it is necessary but neither sufficient nor epistemically central. He appeals to the concept of reenactive empathy, which is more complex than basic empathy. Without reenactive empathy folk psychology would not be possible. The demonstration of the epistemic centrality of reenactive empathy relies on two a priori arguments, derived from Robin G. Collingwood[14] and first applied to the contemporary philosophy of mind by Jean Heal.[15] The first argument concerns the essential contextuality of thoughts as reasons. Understanding a thought as a reason means not just identifying the object of that thought (to think "X thinks that P" I must also think "that P" in my turn), as simulation theorists claim, or understanding its relations with other beliefs, as theory-theory supporters ar-gue. Rather, it is necessary to grasp both the beliefs relevant to the agent in that context and the relation between that thought and the behavior it generates.

Theories of inference (deducing from a thought another derived thought) can inform us about logically correct inferences, but not about which inferences are proper in a given context. Evaluating the appropriateness of a thought in the light of a set of beliefs that are all equally relevant in a given context is a practical ability that cannot be learnt through any theory. It is plausible that in or-der to think someone else's thought we must not merely think the same object of thought as this person, but also use our own thoughts to grasp the other's thinking processes by means of reeanactive empathy.

This is made possible by the common ground built with the other individual. This does not merely consist in the sum of knowl-edges previously acquired about the other individual, but also includes affective and evaluative features that help to understand the subset of the beliefs that are relevant in that given context for that particular agent. These beliefs work as motives, i.e., they are the reasons that lead the agent to behave in one way rather than another. Stueber does not use the definitions "common ground" or "shared cognition", supposedly because he is persuaded that taking someone's else role en-

tails a series of evaluative features. Such features are mostly affective rather than cognitive in a strict sense.

Drawing upon ideas developed by Antonio Damasio[16] and Peter Goldie,[17] Stueber states that «emotions or the ability to respond emotionally to the world be regarded as Nature's way of solving the frame problem».[18] Evolutionary theory highlights the adaptive value of primary emotions: they quickly and automatically select classes of specific somatic and behavioral responses (with a high survival value) to given classes of stimuli.

According to Damasio, emotions are somatic markers because they predispose the body to a specific behavioral response. In an innovative way, Damasio widens the concept of somatic marker to include secondary emotions produced by social learning. Through experience, cognitively complex decisional processes allow humans to learn to associate pleasurable and unpleasant body feelings to the possible outcomes predicted by our imagination every time a choice is to be made. In this case the "emotion" – so to speak – manifests itself in the body as a qualitative response, for example an unpleasant feeling in the pit of the stomach, and operates a primary selection among possible choices on the basis of alternative scenarios with respect to a given state of affairs.

Through these hedonic states humans perform an initial rough categorization of events from the point of view of their relevance to them. It is a quick (and hence effective) and fairly reliable mechanism to make choices, even if it is not necessarily a conscious one. It qualitatively shapes the decisional process in the light of previous experiences. In other words, it informs our perspective on the world.

When this mechanism does not work properly and the agent simply acts on the basis of a cold risk-benefit calculation, the whole cognitive and social sphere of intelligence and behavior becomes maladaptive and dysfunctional, although the specific cortical associative functions are not damaged and IQ is in the normal range. This point is illustrated by Damasio through an examination of both some patients with specific neurological damage and of some classes of psychiatric cases. Apparently trivial or minor choices require great lengths of time, because of the virtually never-ending examination of the pros and cons. Indeed, when solving problems the agent no longer acts by following a sensible order of priorities.

Furthermore, relational behavior as a whole is altered and inappropriate and the subject breaches social conventions and norms. The conclusion is that emotions play a key role in the whole economy of our rational processes. Reenactive empathy is a simulative process that holds together reasons and emotions within the agent's point of view. This process founded on natural selection and social education solves the frame problem, since it detects the appropriateness (or inappropriateness) of reasons as motives justifying behaviors.

The second a priori argument used by Stueber to support the concept of reenactive empathy concerns the essential indexicality of thoughts as reasons. To recognize a thought as a reason it is first necessary for the agent to recognize it as his/her own thought from a first person perspective. The indexical use of the first person pronoun refers to the irreducibility of the meaning of the concept "I", which cannot be deduced from any definition and cannot further be analyzed in terms of an equivalent semantic thought. I can give many descriptions of myself – as a person with a certain appearance, born on a given day, living in a given place and thinking certain thoughts – but these descriptions are all pointless if I do not think that "I" am that person and that those thoughts are "mine". The datum of irreducibility is descriptive and shows a lack of explication. So far there is no empirical evidence of any link between this phenomenal datum and some neurobiological fact.[19]

From an evolutionary point of view, we know neither when nor how this feature of

human thinking evolved, even though according to a Darwinian perspective it may be hypothesized that it is a phenomenon derived from more elementary capacities related to the perception of body schemes. It may be assumed that at first the infant has a perception of himself/herself from a third person perspective and only gradually builds a sense of "mineness" or "ownership" of his/her own experience from a first person point of view.

Once reenactive empathy is assumed as a method to evaluate the agent's mental states as subjective motivation by adopting his/her own point of view, any appeal to general psychological laws becomes pointless. Furthermore, the choice between laws that are equally valid on the normative level but have different practical outcomes must be made on the basis of a reference theory requiring the same empathic process of identification. Any interpretative hypothesis about mental processes which is bound to have as its starting point a plurality of remarks about affections, cognitions and evaluations will only be plausible if it takes into consideration the other person's motivations, assuming his/her own point of view.

Empathy is fallible and is not self-verifying, since there are no norms for its criteria of application and validation. It depends on a kind of practical judgement about the degree of plausibility attributed to a given explanation. The yardstick is subjective, but the charge of interpretative relativism must be rejected. The various hypotheses can be compared and critically examined in the light of rationality criteria and empirical evidence. The comprehension of the point of view of another person the capacity for taking another's role, is a type of learning that evolves through a continuous (and desirable) exchange between cultural growth and a refining of sensibility throughout the course of one's life.

The limits of our empathic capacities are inversely proportional to the degree to which we share our experiences. From an evolutionary point of view, sharing has advantages

for affiliation and is linked to the development of a sense of self into a community. The greater the distance among individuals, the harder the process of identification by means of the imagination. According to David Hume, sympathy can potentially be broadened to any sentient being, non-human animals included, provided that their condition has some connection with ours. Likeness and spatial/temporal contiguity relations further sympathy:

> where, beside the general resemblance of our natures, there is any peculiar similarity in our manners, or character, or country, or language, it facilitates the sympathy [...] We sympathize more with persons contiguous to us, than with persons remote from us: With our acquaintance, than with strangers: With our countrymen, than with foreigners.[20]

The distance that prevents the extension of our empathic capacities to someone else does not consist only in differences in background, i.e., in the incompatibility of different sets of beliefs. Rather, it largely concerns the integration of those beliefs into an ensemble of affections and evaluations. Some evaluations are regarded as important for one's own personal welfare and that of one's community. Adhesion to these evaluations is affectively connoted, shapes social emotions (such as shame or guilt) and provides the foundation for moral habits. Information acquired in a purely cognitive manner is qualitatively different from knowledge somehow affectively experienced. Once knowledge of this last kind has been emotionally integrated within our set of beliefs (and eventually widened and tested by the imagination), it can trigger profound changes and contribute to redefine and rebalance our evaluations and our perspectives on ourselves and others.

One must recognize the inferential character of both introspective and empathic processes in order to recognize one's own motivations and those of others as reasons

for action. Nonetheless, contrary to what Marraffa has argued, I would contend that a particular epistemic authority can be attributed to both processes, since they possess some innate and learnt, biological and cultural, features that help to define the concept of human nature. When explaining mental processes, sticking to this concept is essential if one is to steadily uphold a genuine naturalistic perspective and avoid forms of relativism inspired, for example, by unscientific radical socio-constructivist views.

▌ Notes

[1] M. MARRAFFA, *Mindreading and Introspection*, in: «Rivista Internazionale di Filosofia e Psicologia», vol. VI, n. 2, 2015, pp. 249-260, here p. 257.

[2] See K.R. STUEBER, *Rediscovering Empathy. Agency, Folk Psychology, and the Human Sciences*, MIT Press, Cambridge (MA) 2006.

[3] See F. HEIDER, M. SIMMEL, *An Experimental Study of Apparent Behavior*, in: «American Journal of Psychology», vol. LVII, 1944, pp. 243-259.

[4] See F.L. COOLIDGE, T. WYNN, *The Rise of Homo Sapiens: The Evolution of Modern Thinking*, Wiley-Blackwell, Chichester 2009.

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