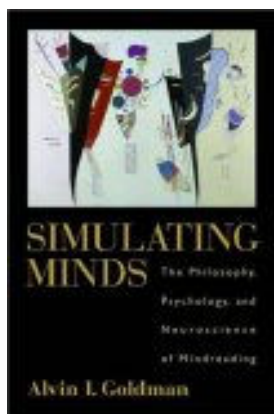


Recensione

**SIMULATING MINDS: THE PHILOSOPHY, PSYCHOLOGY
AND NEUROSCIENCE OF MINDREADING**

Oxford University Press, 2006

by Alvin Goldman



In *Simulating minds* (2006) Alvin Goldman provides arguments for a hybrid simulationist approach to mindreading capacities. Mindreading is a second-order activity based on producing beliefs about a target's first order mental states. In particular, *detecting* is the capacity to point out current mental states of a target and *predicting* is the capacity to predict the behavior of a target by using information about his underlying mental states. The two most important theories of mindreading are the Theory-theory (TT) and the Simulation theory (ST). ST is about predicting a target's decisions by putting oneself into her shoes and going through the same decision-making process. On the contrary, TT maintains that mindreading is an information-rich mechanism that processes theories about the target's mental states. The core chapters of Goldman's books are chapters two, six and seven where he explains his simulationist theory of low-level and high-level mindreading, and then chapters nine and ten where he focuses on introspection.

The low-level mindreading prototype is a mirroring type of simulation process. It is a primitive, automatic, largely unconscious process. In chapter six Goldman focuses on a special class of mindreading tasks, namely recognizing someone's face as expressive of certain emotions. Empirical findings demonstrate that when we look at someone making an expression *e*, we are also affected by a type of emotion which is actually related to *e*. There may be a causal relation between a basic emotion *E* and an expression *e* that, when observed, eventually causes the same type of emotion *E* in the observer. That is, the perception of fear in the target's face directly elicits activation of the same neural substrate in the observer, who introspects and classifies that emotion as fear and then projects fear onto the target. However, these empirical data only suggest that the expression *e* is a signal that elicits a certain kind of emotion. A particular cue may elicit fear by signaling danger. This does not entail that the observer would consider that

particular cue as an expression of fear in the first place. That is, mirroring effect is not the same as mindreading.¹ However, this “resonating mechanism” may play a role in mindreading. As a matter of fact, people who have a relevant emotion system E damaged are also impaired in recognizing the emotion E in others’ faces. So apparently the deficiency in seeing threats corresponds to a deficiency in recognizing scared expressions. However, *pace* Goldman that does not prove that low-level mindreading is based on simulation, as we can assume that the impairment may exclusively concern the cognitive capacity to respond appropriately to signals of threat. Hence, in order to attribute an emotion to the target we probably need an information-rich process that may not rely on a simulation routine. Therefore, it is not so obvious that simulating is the foundation of low-level mindreading.

High-level mindreading uses pretense or enactment-imagination. According to ST, the mindreader takes the target’s mental states by creating in her (pretended) desires, beliefs and intentions. Then, given those premises the mindreader herself runs a genuine practical reasoning process, which is supposed to be the same as the one run by the target. The outcome of this process is a (pretended) decision that the mindreader applies to the target. That is, the mindreader introspects and then projects a first order mental state of hers onto the target. Moreover, she uses E-imagination to resemble others’ mental states and to put herself in the target’s shoes. ST maintains that mindreading is mainly a matter of assuming the target’s prospective and inhibiting a self prospective when this is not functional to the mindreading process. That does not mean that the mindreader elaborates a set of beliefs about the target’s mental states. On the contrary, mindreaders first try to adopt the target’s prospective² and then adjust it by using an informed theory process. That is, mindreaders need to correct their preliminary simulation by adjusting some of their egocentric bias in order to fit the target’s point of view. Although inhibiting self-prospective is essentially a simulation practice, this adjustment step requires an element of theorizing, because the capacity to scrutinize the target’s mental set entails a theory-like body of knowledge. That is, the detection of the target’s initial mental states has to be guided by theory, as simulation process works only in predictive cases and cannot run “backward”, from observed behavior to mental states.

¹ On the other hand, if being scared is due to an interpretation of a target’s face as scared, that means that the emotion-resonance is *caused* by mindreading. Goldman could not accept such a view because it would imply that the mindreading occurs before the simulating process has taken place.

² The difficulty in inhibiting self-prospective is usually responsible for egocentric errors on several mindreading tasks, like the false-belief task.

Therefore, although Goldman sustains that mindreading is by default a simulation-practice, he admits that mindreading entails a form of theorizing and therefore he argues for a hybrid simulationist approach. On the other hand, theory-theorists do actually deny that simulation routine does play a role in mindreading practice (Nichols and Stich, 2003). In this respect it is hard to distinguish Goldman's views from weakened forms of theory-theory.

The main difference between TT and ST lays in how they explain the relation between third-person mindreading and self-attribution. ST maintains that there is an asymmetry between first and third person mindreading. Although people do not use simulation routine in first person mindreading, third person mindreading employs classification of one's own mental states in order to classify states of others. That is, simulation mindreading requires undertaking a first personal outlook in order to predict and imagine the target's point of view. That also implies that children acquire the capacity to attribute mental states to themselves before they acquire the capacity to attribute such states to others. Therefore, Goldman embraces the theory of *privileged access*, namely that people are in an authoritative position in relation to their own mental states. Moreover, he assumes that there is a *special method* of accessing one's own mental states, namely a quasi-perceptual process that works only in first-person attribution. He thinks that this introspection system takes features of concrete mental states as inputs and yield classifications of those states as outputs. Introspection takes place thanks to an introspective code (I-code) used to *represent* mental concepts and to *classify* currently observed mental state tokens.

Goldman's approach to self-knowledge faces several difficulties. For example, there is empirical evidence that people who are not able to access to their own mental states nonetheless explain their own behavior in terms of intentions and decisions (Gazzaniga, 1995). These data seem to support the thesis that self-knowledge is mostly a matter of self-interpretation rather than introspection (Carruthers, forthcoming). Goldman's theory faces some major problems also when it comes to introspection in autistic children. Goldman maintains that introspection is intact in autism, although autistic kids face major difficulties in third-person mindreading. But there are also empirical data which indicate that autistic people are also impaired in ascribing mental states to themselves. That may suggest that there is only a single faculty for both mindreading and self-knowledge (Carruthers, forthcoming). In this respect, the debate on autism may hold the key to some of the most relevant questions about self-knowledge and mindreading.

In conclusion, Goldman's book provides an extensive analysis of the simulationist approach by bridging cognitive neuroscience, developmental psychology, and philosophy of mind and therefore represents an essential reading for all who are interested in mindreading.

Marianna Bergamaschi Ganapini

- Carruthers, P. (forthcoming). Introspection: divided and partly eliminated. *Philosophy and Phenomenological Research*.
- Gazzaniga, M. (1995). Consciousness and the cerebral hemispheres. In M. Gazzaniga (ed.), *The Cognitive Neurosciences*, MIT Press.
- Nichols, S. and Stich, S. (2003). *Mindreading: an integrated account of pretence, self-awareness, and understanding other minds*. Oxford University Press.

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