

The Social Brain: Sociological Foundations, by **Sal Restivo**. Lanham: Lexington Books, 2023. 206 pp. 95\$ cloth. ISBN: 9781666927054.

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“Genes and neurons are social entities” (p. 133). If such a statement may sound radical or even provocative, it is not so much due to the content itself. Rather, it is a consequence of the hegemony of the most reductionist approaches that have influenced the study of cognition during the past thirty years. These approaches suggest that to uncover the secrets of human cognition, emotions, and behavior, we need to focus solely on the brain, neurons, or genes. Yet, the limitations of these paradigms are becoming increasingly evident. Indeed, many scholars regard it as an essential need to find credible alternative models. It is now necessary to design models that integrate the biological, cultural, social, and technological aspects of cognition without prioritizing any single element. Despite the ongoing dominance of reductionist perspectives, alternative theoretical proposals have always existed; they were put forth by social scientists, life-, and neuroscientists. Sal Restivo relies precisely on this diverse literature to formulate his *Social Brain* model, with the aim to “integrate and extrapolate the various emerging proposals designed to revise classical thinking about the brain/mind/body and the directions such revisions should be taking. This integration has led to the most highly networked model of the brain-in-the-world literature” (p. 116).

However, this objective goes against the grain of the currently prevalent individualistic culture. Consequently, the first part of the book – spanning from the first to the ninth chapter – critically examines the most popular models, laying the groundwork for Restivo’s own proposal. Despite the diversity of the themes addressed – from the body to artificial intelligence, from sociological imagination to the ideology of genius – the overall purpose of these chapters is clear: to challenge and overcome, thanks to the results offered by sociological research, what Restivo terms a “conspiracy of mythologies: the myth of individualism, the myth of the brain in a vat, and the myth of brain-centric thinking reinforced by the gene-centric thinking” (p. 69). The combined action of these mythologies has strongly contributed to fueling the systematic blindness to the social dimension of our existence; a sort of “dissociation spectrum disorder” (p. 56) suffered by Western culture.

This oblivion of the social dimension is evident in various areas, such as in the “Great Man theory of history” (p. 25). However, perhaps it is most pronounced in the ideology of genius, where by virtue of his or her exceptional biological characteristics, the genius is able to drive social innovation. The two chapters dedicated to figures like Albert Einstein (sixth) and John Coltrane (seventh) provide a tangible analysis of the expression of this ideology. Einstein, in particular, represents in Western culture the ultimate incarnation of genius; in fact, it is certainly no coincidence that, during Einstein’s autopsy, Dr. Thomas Harvey decided to remove his brain in order to preserve and study its sections later on. As Restivo rightly argues, the whole affair, as well as the neuroscientific research carried out since the 1970s (Harvey’s operation was known by the public only in 1978), provide more information about our scientific culture than about Einstein’s actual uniqueness. This story indeed testifies to how deeply rooted in scientific culture the neuroreductionist view of the mind is: Einstein’s brain is actually a

“sacred scientific relic” (p. 65) that contributes to reinforcing that peculiar “symbolic device” (p. 68) we call “genius”.

Restivo takes an opposing stance, arguing that genius emerges from social networks rather than individual traits alone: “give me a genius and I’ll give you a social network” (p. 71). Such a formula is also a precise methodological indication. The so-called “geniuses” in fact tend to cluster and develop themselves and their activities in a specific historical and social environment. From this point of view, not only is it incorrect to attribute discoveries to single individuals, but it is also possible to identify the historical conditions that are favorable to the birth of geniuses (and therefore somehow predict it).

Restivo’s Social Brain model is discussed in the last four chapters and in particular in the eleventh (“The Social Life of Brain”). Studying the brain starting from “networks, connections, and interdependencies” (p. 21) implies also adopting three basic assumptions, which neuroreductionism tends to put in the background: 1) humans have always and since the beginning evolved as social beings, 2) consequently, consciousness is also a social phenomenon, 3) and finally “the mind is just the body at work” (p. 7). In this regard, Restivo also recalls the position of George Herbert Mead, who considers social action a precondition for the development of consciousness, in a way that allows for rewriting the Cartesian principle as “*sumus ergo cogitamus*” (p. 111). Thus, there is a foundational relationship between social relations and mental processes.

The social brain model is in fact closely linked to the “social intelligent hypothesis”: originally formulated in primatology, according to this hypothesis the complexity of social interactions is one of the reasons that explains the brain mass increase. Restivo’s model extends the boundaries of cognition well beyond the neurocranium, towards the social and cultural technological environment, but without identifying a privileged place that can be considered the quintessential seat of cognition: mentality “does not exist ‘in’ the brain, nor for that matter in the environment, but in a systematic ‘in-between’ space that links brain, mind, culture, and environment” (p. 121). However, unlike many perspectives that embrace the extended mind idea, Restivo insists that the causal chains connecting these levels are not serial and hierarchical. According to him, in fact, many of the theories that extend the boundaries of cognition towards the environment often give explanatory priority to biological factors and therefore tend to follow a linear explanatory logic. Following an interpretative path opened by Clifford Geertz and developed by others, Restivo argues instead that behavior and cognition emerge from “complex and recursive interactions of molecules, cells, genes, neurons, neural nets, organs, biomes, the brain’s various regions, the central nervous system, other elements of the body’s systems and subsystems, and our social interactions in their ecological Umwelt contexts” (129).

The role played by the concept of Rhythmic Entrainment in Restivo’s proposal deserves a separate consideration – this is one of the most significant contributions of the volume. Entrainment, as predominantly studied in biomusicology, occurs through mechanisms of rhythmic synchronization – typical, for example, of music and dance. Restivo extends these considerations to the capacity for human cooperation and resonance. He argues that mere “bodily co-presence” is enough to stimulate rhythmic entrainment, so that “when humans come into contact with other humans a field is generated that [...] carries emotional communication and consciousness” (p. 68). Restivo also uses this concept to reinterpret some classic categories of social sciences – such as Durkheim’s collective effervescence understood as the result of chains of rhythmic entrainment –, but this is just one example of the many possibilities for further exploration and areas of application of such an ambitious model. A model that – in conclusion – invites us not only to keep questioning the dominant framework in which cognition, emotions, and behaviors are thought of, but also to set the premises to study and politically address from a different perspective “our mental and physical problems at the societal level” (p. 153).

