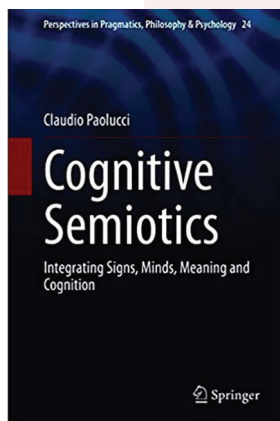


Can enactivism and semiotics be together?

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Claudio Paolucci

Cognitive Semiotics: Integrating Signs, Minds, Meaning, and Cognition

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“Claudio, enactivism is the attempt to think about cognition in a non-representational way, but semiotics is intrinsically representationalist. So they cannot be together.” These words by Jean Petitot have stuck with Claudio Paolucci ever since 2003, when he was working under the former’s mentorship at the CRÉA, the Centre de Recherche en Épistémologie Appliquée. In Paris, Petitot had been a close collaborator of Francisco Varela, and Paolucci could definitely see the merit of their enactivist ideas, but doing away with semiotics was out of the question, especially for one of Umberto Eco’s last students. Having reflected on those words for almost two decades, Paolucci (2021) is now ready to assertively proclaim that “Yes, semiotics and enactivists *can* be together and they *have* to be together.” Such is the author’s confidence in this union that he recently spearheaded the establishment, in Bologna, of the International Centre for Enactivism and Cognitive Semiotics. His latest book thus comes not as a self-standing monograph concerned with its author’s idiosyncratic interests, but as a manifesto of sorts for the now institutionally enshrined idea that enactivism and semiotics belong together. Yet, putting the representational and anti-representational together is no small feat. It takes

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significant effort and skill on the part of the author, who does away with concepts he finds unhelpful, before molding the ones retained so that they fit each other well, thus turning them into the coherent whole that is his cognitive semiotics. There is a recurring pattern here that we can start teasing out in the following overview of the book, since, as we shall eventually see, the strategy followed throughout its chapters is one that makes this a treatise worth reading.

Overview

The author opens with a bold move: he eschews the commonplace belief that there is a clear-cut threshold between nature and culture and that the job of semiotics is to study only what is on the cultural side of this division. Given that semiosis can be found in so-called 'natural' systems of communication, Paolucci drops the commonplace idea of semiotics as a *logic of culture*. Instead, he espouses Eco's (1976) other definition of semiotics as a *theory of the lie*, which wants organisms to use sign systems deceptively, as a means for effective action. As he points out, effective action often requires hiding (whether advertently or inadvertently) rather than representing the true object of the sign. If we are to conceive signs based on their role in actual living, rather than as soulless pieces of some encyclopedia, then Paolucci's seems a reasonable choice. From this, what emerges is a theoretical framework suitably geared to studying how signs partake in acting and (by extension) thinking. The author specifically puts together a composite theory comprised of *Radical Enactivism, Peircean Pragmatism, and Material Engagement Theory*. The first helps him show that "meaning is not thought as content representing the world as being a certain way", while the second lets him replace the popular notion of truth conditions with the idea that "meaning is identified with habits and with sense-making" (6). As for the theory of material engagement, it is included in the toolkit for its sensitivity towards the scaffolding that materials provide to cognition and semiotic systems. With these tools in hand, Paolucci is able to reframe sense-making as "*the activity of adding subtractions which carves out a world of values and meanings (an "environmental world")*" from the starting point of many other possible environments and worlds" (14, emphasis in original). Otherwise seen, sense-making is an "act of enunciating" – though in this case, the expression token is not determined by a disembodied expression-type; it is instead shaped through its intimate and direct relation with the plane of content.

After sketching a solid theoretical position about the synergism of signs and action, the author goes on to tackle a number of issues faced by semioticians and enactivists alike, starting with subjectivity in Chapter 2. From where he stands, "[s]ubjectivity is not born of the linguistic "I", but of the semiotic ability to lie, to

construct signifier surfaces which build worlds that are alternative to the real one and place fictional objects within them” (36). He argues that deception entails making oneself an object of reflection because it involves splitting the self into a subject that acts and a subject that evaluates the effects of its actions. To pave the way for an enactive semiotics of subjectivity, he draws upon Hjelmslev’s (1935) concept of *pre-logical mind*, which is founded on the *law of participation* and the distinction between *intensive* (i.e., simple, precise) and *extensive* (i.e., complex, vague) terms. And here is the crux of his recovery: he argues that it is the third person, rather than the first, that has priority over the others because of its extensiveness compared to the intensiveness of the other two. As he is keen to point out, the third term no doubt refers to a person, but at the same time, it also refers to what is spoken of. Though, upon closer inspection, the same could be said about the first two persons when the enunciator treats them as enunciated. According to Paolucci, it is through these very acts of enunciation that we effectively achieve a kind of short-circuit between subject and object, an abridgment through which subjectivity emerges for both self and others. On the face of this, the author ultimately calls for replacing the commonplace Ego-centric model of Benveniste with the Levinasian concept of illeity (after the French ‘il’ in cases such as ‘il pleut’) in order to denote “the impersonal event which opens up subject positions” (52).

In Chapter 3, Paolucci shifts his attention to the semiotic mind and the issues of belief and habit. Again, the chapter begins by challenging the dominant paradigm – in this case, the usual conception of interpretation as a private process through which a person makes sense of the extra-personal world. In Paolucci’s model, community plays a fundamental role in interpretation, as sense-making is about evaluating our own sensory engagement with the world against the impersonal takes already circulating in the community. According to the author, the determination of value, the meaning that things have for oneself when mediating between world and community, is the very definition of a semiotic mind’s activity. In working toward an anti-Cartesian semiotics, he specifically combines the Peircean concept of *belief* and the radical new theory of *extended mind* (as framed in the theory of material engagement; Malafouris 2013). The first lets Paolucci tie actions and habits to the euphoric state of stability reached through inquiry when attempting to appease the dysphoric state of doubt and instability; the second allows him to highlight the importance of the material substrate for the emergence of meaning in non-propositional and strongly embodied kinds of thinking. What comes out of this coalition is the *semiotic extended mind* – an idea built on two main pillars, one metaphysical and the other phenomenological. The former entails assuming that everything is continuous (as per Peirce’s synechism), which in turn means that the mind runs through matter, rather than inside it; while the latter involves treating the self as a correlate of consciousness

(as per Peirce's phaneroscopy), rather than submitting to the ontological priority usually granted to the subject. By making this double pragmatist turn, Paolucci is effectively setting himself up for concluding the third chapter with an essential step towards the combination of enactivism and semiotics: he 'naturalizes' representation by framing it as the inward effect of the externally circulating signs that make up the communal mind – hence the term *semiotic representation*.

Next up in Paolucci's agenda is social cognition. Here too, we find the dominant school of thought being challenged. The usual approach in early mindreading studies involves attributing the mindreading abilities that children eventually develop to the expression of a genetically predetermined capacity known as *theory of mind*. But the author thinks otherwise. He posits that pre-linguistic children make sense of their own and others' actions by organizing them in narrative frameworks – albeit in a technical rather than representational manner. Paolucci builds his radical approach to social cognition in three steps. The first involves drawing upon the discovery of mirror neurons, which have been implicated by Gallese (2005) in the long-term process through which children learn how to use folk psychology. According to Paolucci, the biological, 'low' level of social cognition on which we rely during our first couple of years can be tied to the activation of mirror neurons in certain areas of the brain when triggered by the actions of others in intersubjective contexts. The second step involves giving a semiotic spin to the enactivist proposal known as the *Narrative Practice Hypothesis*. Defended by Gallagher and Hutto (2008), this hypothesis attributes the eventual grasping of mental states, such as beliefs and desires, to the narration of stories by caregivers. Yet as Paolucci points out, children are able to organize their experience before they become capable of understanding language, which is why he shifts his attention from narratives to narrativity – namely, semiotic narrativity. According to what he fittingly calls the *Narrative Practice Semiotic Hypothesis*, "*narrativity is the deep structure of meaning*" (102, emphasis in original) that characterizes the 'high' level of social cognition in his two-level model. As for the third step that the author takes on his way toward a radical semiotics of social cognition, this concerns the place of narrativity in developmental trajectories, when children become capable of building their own stories and using them to cheat others – though the development of full-blown narrativity also encourages pretend play, besides just deception.

Last but not least, in Paolucci's list of issues under consideration, is perception. Once again, he goes against the grain: rather than attributing perceptions to world-to-mind processes, he ascribes them to mind-to-world processes. The author dismisses the mainstream view according to which the world is passively imprinted onto our senses and brain. Prompted by the problem of perceiving something for which there is no prior concept, Paolucci calls upon Clark's (2016)

Predictive Processing, a top-down approach to perception. As the author points out, this idea of drawing on interpretants and habits in order to make predictions about incoming signals is one we encounter in the work of Clark (2016) as well as Eco (1999). However, Paolucci differentiates his approach from Eco's in some crucial ways: he replaces the Kantian *schema* with the Peircean *diagram* when referring to what mediates between inference and perception, and grants habit a more critical role in perception. Laws and regularities, he argues, provide the background against which singularities emerge when differentiations are triggered by instability effects. Habits also let us 'see' mental images lying nascent in diagrams. But of course, besides relying on habits, the generation of diagrams also depends on the *Laws of Imagination*, which Paolucci borrows from *Gestalttheorie*. In building a semiotics of perception grounded on imagination, he characteristically frames perception as a *controlled hallucination*. Following Koenderink (2010), he uses the term to describe the general functioning of a controlled perceptual process that tends to minimize disorder and surprise by drawing upon previous knowledge and constructing the future, rather than simply observing the present – this is a process of perception that involves anticipating and (to an extent) experiencing the next thread of sensory information even when the expected signal never registers, as in the case of hallucination. So how does the imagined meet the actual? It is through the Gestalt property of semiotic narrativity, concludes Paolucci, that the hallucination of imagination is matched to the control of the world.

Thoughts and impressions

By closing with a story- rather than environment-driven take on perception, the author is admittedly distancing himself from the mainstream notion of *veridicality*, according to which percepts coincide with reality. Needless to say, this comes as no surprise if we consider that Paolucci opens the first chapter by tying signs to lying and efficacious behavior. In a way, it feels as if the book ends back where it started.

What is especially noteworthy, though, is that this sense of circularity does not come through a concluding chapter with the dedicated purpose of wrapping things up. If we were to put it in the Greimasian terms that the author employs in Chapter 4 in order to describe the prototypical structure of narrativity, the book seems to be telling us a story that remains incomplete or – to use a better word – ongoing. The first three of the story's four interrelated positions seem perfectly clear: the *contract* was probably established a long time ago, when Paolucci recognized the development of enactive cognitive semiotics as something worth acting for; *competence* is for the most part established in Chapter 1, where the author prepares himself epistemically for the upcoming task by drawing on other theories;

and *performance* is established in the following four Chapters, 2 through 5, where Paolucci transforms our views on subjectivity, the semiotic mind, social cognition, and perception from an undesired to a desired state. But what about *sanction*, the fourth and final stage of a story?

Perhaps the success or failure of the author's cognitive semiotics is something to be empirically validated when theory meets practice. Interestingly, Paolucci closes Chapter 4 by telling us about a project on Autism Spectrum Disorders (ASD) currently being run by the Cognitive Semiotics Unit at the University of Bologna. Maybe then, we can wait and see whether the theoretical approach developed in this book can help pre-primary teachers, families, and caregivers identify the onset of a neurodevelopment disorder much earlier than the 2-year mark when a delay in language acquisition signals the presence of ASD. If this is what remains for sanctioning the story told here, even if preliminarily and partially so, then the lack of a proper conclusion seems fitting.

Curiously, there is at least one more way to explain the structure of the book through its own terms, one relating to the genesis and transformation of its writer's subjectivity over the course of the treatise. Not long after reading Chapter 2, I noticed that Paolucci maintains a delicate balance between outward and inward-looking. It felt as if the author is weaving the chapters in the inverted person hierarchy motif that starts from the *delocutive* chapter which identifies sense-making and cognitive semiotics as what is spoken of (Chapter 1), before alternating between the perspectives of interlocutor and locutor, with subjectivity (Chapter 2) and social cognition (Chapter 4) being the *allocutive* stages of empathy with self and others, and mind (Chapter 3) and perception (Chapter 5) being the *locutive* ones of belief and sense. While the first chapter focuses on the object of discourse (i.e., doing enactive cognitive semiotics), the following four chapters concern objects of discourse and subjects spoken of at the same time – 'subjects spoken of' in being about subjectivity, mind, social cognition, and perception; and 'objects of discourse' in being about framing them in cognitive semiotic terms. I think it would be fair to say that, if 'subjectivity' were a subject, it would be a 'you' given that it springs from intersubjectivity, and of course, the same would go for 'social cognition'. As for 'belief' and 'perception', an 'I' would probably be more fitting, given that both are personal evaluations.

Strictly speaking, of course, neither of the last two terms is an exclusively private affair, as this book clearly demonstrates. And likewise 'subjectivity' and 'social cognition' are not exclusively communal either. These concepts, then, seem to resist compartmentalization, and this is something that the author recognizes well about the relation between our faculties, as can be seen for example when he uses diagrams to frame perception and inference as two sides of the same coin. And yet the pattern of the chapters still *looks* and *feels* like a motif that unfolds as such: 'he-you-I-you-I'.

Perhaps, the reason for seeing it this way is my pre-logical mind (to borrow another term from Chapter 2). From this Hjelmslevian point of view, one could say that the book's opening chapter works as an extensive term that embodies the intensive terms *subjectivity*, *mind*, *social cognition*, and *perception*, thus enabling Paolucci to expound his own approach by speaking in turns about the participative categories of cognitive semiotics. Of course, I may be 'hallucinating' pattern where there is none, in which case all one should keep from this is the power that priors have over the process of 'seeing'. And yet there is always the chance that the inverted pyramid is somehow actually there, but its presence was entirely unintentional, in which case its pragmatic effects on sense-making are still exerted. I leave it up to readers to decide.

Now as far as its contents are concerned, it is safe to say that the book does exactly what it says on the cover. If we were to go with Zlatev's (2015) understanding of *cognitive semiotics*, then the treatise at hand exhibits all five of its defining features: i) it emphasizes the conceptual-empirical loop (e.g., in the interplay between inference and percepts), ii) it involves the methodological triangulation of first-, second-, and third-person perspectives (e.g., by combining the 'subjective' perspective of philosophy, the 'intersubjective' perspective of infant research, and the 'objective' perspective of neuroscience); iii) it is influenced by phenomenology (Peircean phaneroscopy, to be precise); iv) it conceives meaning as dynamic rather than static (the existence of meaning as a habit is marked as a founding principle), and iv) it is trans-disciplinary (since Paolucci's main goal is to show how the study of meaning and cognition cuts 'between and across' disciplines).

Yet the strength of this book lies not in its conventionality, but in its *unconventionality*, or dare I say, its subversiveness: it challenges the logic of culture; it overturns Benveniste's person hierarchy; it renounces the internalist approach to the mind, the equation of sign with representation, and the Analytic approach to representation; it does away with theory of mind, and it refutes the bottom-up take on perception.

Not without good reason though: signs emerge in the context of nature and life; subject positions are opened up by impersonal events that allow us to enunciate ourselves and others as enunciates within; the mind is enacted and extended in that it entails actively engaging with the world; signs are non-representational when operating at the level of perceptual presentation; representation can be framed in content-less ways since basic minds produce meaning through bearing interpretants, habits, and dispositions to act; the intentions and values of others can be gleaned by placing their actions in non-linguistic narratives, and percepts are built in anticipation of what is to follow.

If one were to accept these radical points of view, they would find before them new ways of studying the relationship between human minds and semiotic systems:

sense-making can be treated as the singular act of cutting down the possibilities afforded by a system, on the basis of schemas brought forth through recourse to already established uses and norms; subjectivity can be seen as the emergent product of events that open up positions for meaningful action; the semiotic mind can be viewed as the constitutive intertwining of brains, bodies, and things; signs can be seen as impersonal public interpretants circulating in the community; representation can be seen as the inward effect of an external mind; social cognition can be seen as the emergent product of organizing the actions of self and others in technical narratives, and perception can be framed as a top-down mechanism of predictive processing that is driven by our diagrammatic engagement with the material world.

To help us conceptualize these ideas, Paolucci composes a vocabulary that includes a number of creative concepts, such as *theory of lie*, *adding subtractions*, *illeity*, *semiotic extended mind*, *semiotic representations*, *semiotic narrativity*, *controlled hallucination*, and *diagram*, spurring our thoughts across different lines of flight depending on personal priors and encyclopedic background. Several ideas come to mind about ways to follow these leads, though our discussion shall be restricted here to just a couple.

The first concerns the difference between signs, representations, and deception-capable sign systems, in terms of Peirce's semiotic phaneroscopy. It seems to me that these correspond to the second, third, and fourth levels of Peirce's *phaneron*, as Romanini (2006) describes it. Starting from the *grounding* stage of the immediate object and immediate interpretant, we move upwards to find the second period, that of *presentation*, where we first encounter the sign, along with the dynamic object, the dynamic interpretant, and the final interpretant. It is at this level, characterized by Romanini (2006: 121) as that of "material implication," within which we find the non-representational signs that Paolucci associates with basic minds. One level further up is where we find "the representative property of the sign: the way it relates to its dynamic object, how this representation is effectively interpreted by the dynamic interpretant, and the how this representation projects itself towards a representative ideal expressed in the relation between sign and final interpretant" (Romanini 2006: 123). It is at this third stage, that of *representation*, where we find the semiotic representations associated by Paolucci with technical narratives. That representation is not the epitome of semiosis is something Romanini's model demonstrates clearly, for the fourth and topmost period of the *phaneron* is occupied by *communication*. This, as he puts it, "is the level in which sign, object, and interpretant get into effective communion, creating a non-reducible triadic relation able to produce a final communicative effect" (Romanini 2006: 121). As I see it, the deceptive use of sign systems that Paolucci ties to efficacious action can be associated with this uppermost level of the *phaneron*, given that deceiving is communicating, dishonestly but skilfully so.

The autopoietic actions of humans and higher-order animals could thus be attributed to mastering the relations between a sign, a dynamic object, and its dynamic and final interpretants.

The second point I would like to raise concerns the place of making mistakes for making sense, as well as the importance of the most error-prone of inferences. Being deceiving in the context of a communicative event is an act that obviously implies the presence of someone being deceived. A theory of lie is therefore nicely tied to Peirce's *fallibilism*. From the vantage point of pragmatism, "the study of signs and the action of signs, semiotics, is *eo ipso* the study of the possibility of being mistaken" (Deely 2001: 637). And to speak of the most fallible of inferences means speaking of *abduction*, an iconically supported kind of thinking that is most compatible with the Peircean concept of diagram that Paolucci introduces in the chapter on perception. As Peirce points out, "abductive inference shades into perceptual judgment without any sharp line of demarcation between them; or, in other words, our first premisses, the perceptual judgments, are to be regarded as an extreme case of abductive inferences, from which they differ in being absolutely beyond criticism" (CP 5.181). Clearly then, the abductive generation of hypotheses is key in any Peircean discussion on perception. In fact, Paolucci's idea of 'thinking through doing' can be nicely framed as *manipulative abduction*, to borrow a term from Magnani (2009, section 1.6). And while on the topic of abduction, we might as well point out the connection between the idea of sense-making as an activity of adding subtractions and what Magnani (2017, section 1.2) calls the *shutdown problem* – that is, finding criteria for hypothesis selection. Such a connection would of course entail recognizing the prior problem of specifying the conditions for coming up with possible candidates for selection – namely, the *fill-up problem*. From what I garner, tackling this set of problems means addressing the crucial semiotic problem of perceiving that which has yet to be conceived.

All in all, then, is this book worthwhile? Well, if the following definition by Deleuze is to be taken as any measure, then the answer is certainly "yes." From a Deleuzian standpoint, worthy is a book that (1) claims to correct an error, (2) wants to correct an oversight, and (3) creates a new concept (qtd. Dosse 2010: 112). What this review aimed to demonstrate is that all three of these functions are repeatedly performed throughout its pages: the polemical, the inventive, and the creative alike. Chapter-by-chapter Paolucci challenges the usual tendency of studies on an issue, before showing us what has been left overlooked and proposing a new way of conceiving it. Of course, whether one agrees with his line of thought, in the end, depends on prior inclinations and openness to change – so it's a matter of perspective. As far as my own is concerned, Paolucci's mission certainly finds me in agreement. The disbelief expressed in the opening quote is something I encountered myself

some time ago when merging Peircean semiotics with the enactive theory of material engagement for the purpose of elucidating the origins of our sapient mind. But I think the time is now ripe to accept a two-fold proposal about the connection between mind and meaning: that action and cognition take place through the semiotic filter of encyclopedias, and that signs are meaningful due to their place as habits in the world. This is precisely why enactivism and semiotics should work together towards *cognitive semiotics*, a common goal that this homonymous book serves well to recognize.

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