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Section: Psychology

PSYCHOSEMIOTICS: CHALLENGES AND PERSPECTIVES

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Abstract. This paper explores the emerging interconnection between psychology and semiotics, primarily within the framework of cognitive semiotics and psychosemiotics. By reconciling the linguistic structuralism of Saussure and Hjelmslev with the interpretive semiotics of Umberto Eco and the pragmatism of Charles Sanders Peirce, this study maps the shift from rigid codes to fluid, intersubjective processes of meaning-making (Paolucci, 2021). We argue that cognition is a transformative process rooted in body-environment interactions and the mind must be understood as a "physical symbol system" that precedes and enables sign use (Saller, & Schoeller, 2018).

1. Introduction

Historically, semiotics and psychology have often reinvented each other's theoretical frameworks while neglecting their respective empirical and conceptual achievements. Cognitive semiotics is not merely a branch of semiotics but a transdisciplinary field seeking to answer how we come to know the world through signs and languages (Paolucci, 2021). This inquiry integrates concepts from linguistics and cognitive science, grounded in the phenomenology of Husserl and Merleau-Ponty (Husserl, 1999; Merleau-Ponty, 2012; Oakley, 2024). Psychosemiotics complements this by viewing the individual as a physical symbol system, where knowledge is encoded into symbolic codes physically realized in biological mechanisms (Michon et al., 2003). A core principle of this interconnection is the "Mind before Sign" hypothesis which asserts that basic subjectivity and pre-reflective self-consciousness are preconditions for sign use rather than mere products of it (Oakley, 2024). The ultimate question: cognitive semiotics provides the transdisciplinary architecture to answer our oldest obsession: How do we come to know the world?

2. Methods

The synthesis of psychology and semiotics employs a methodological triangulation to bridge the gap between subjective experience and objective observation. This approach integrates three distinct perspectives:

1. First-person (Subjective): Using phenomenological methods and conceptual analysis to explore perception and mental imagery.

2. Second-person (Intersubjective): Employing empathy and imaginative projection to study social interaction and the shared lifeworld.

3. Third-person (Objective): Utilizing experimentation, brain imaging, and computational modeling to analyze isolated behaviours and biochemical processes (Paolucci, 2021).

Researchers utilize the "conceptual-empirical loop," ensuring that key concepts like "sign" or "subjectivity" are both philosophically reflected upon and implemented in empirical research. This is further supported by the Motivation and Sedimentation Model (MSM), which analyzes meaning across three levels: the Embodied (universal capacities), the Situated (actual discourse), and the Sedimented (culture-specific norms and schemas) (Oakley, 2024).

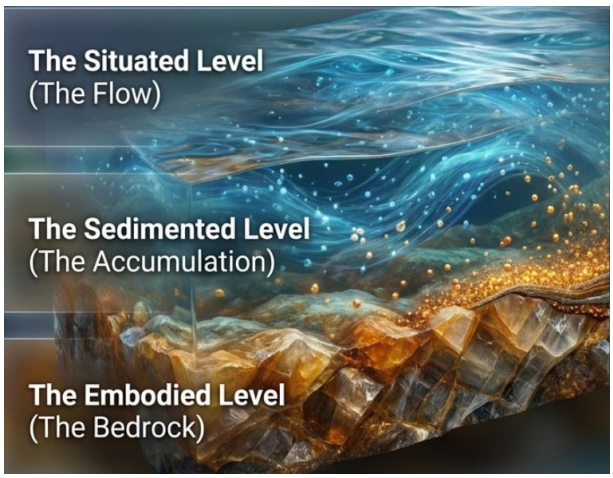


Figure 1. The Three Layers of Sedimentation

- The Situated Level (The Flow). The level of actual, contextual discourse and expressive acts. This is the dynamic, active surface of meaning in real-time intersubjective situations.
- The Sedimented Level (The Accumulation). Like particles sinking in water, situated acts sink and stabilize over time (both in an individual lifespan and over generations). This forms our schemas, rules, and cultural norms.
- The Embodied Level (The Bedrock). Universal human semiotic capacities, such as perception, imagination, and analogy-making, which allow and motivate the expressive acts above.

3. Results

The integration of these disciplines has yielded a more comprehensive model of the human mind and its sense-making processes. In particular, drawing on classical pragmatism, cognition is found to be a continuous process reaching from pre-conceptual "Firstness" (raw sense impressions) to propositional "Thirdness" (Saller, & Schoeller, 2018). Thinking is found to be impossible without signs, where the ego mediates between external reality (Peircean signs) and internal psychic pressure

(Iwaszuk, 2019; Peirce, 1998). Thus, the psycho-semiotic model is a unified model of mind where conscious interpretation is inevitably shaped by “unconscious phantasy” (Klein, 1930).

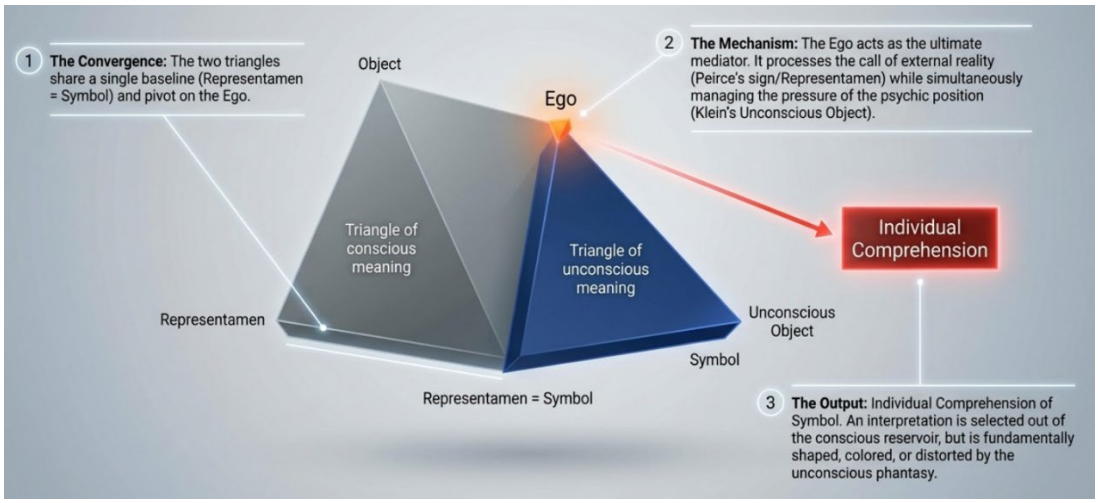


Figure 2. The Psycho-Semiotic Pivot

We should also take into account that semiotics deals only with such signs which can be used to lie to anybody as telling the truth and saying a lie are interconnected cognitive operations (Eco, 1976).

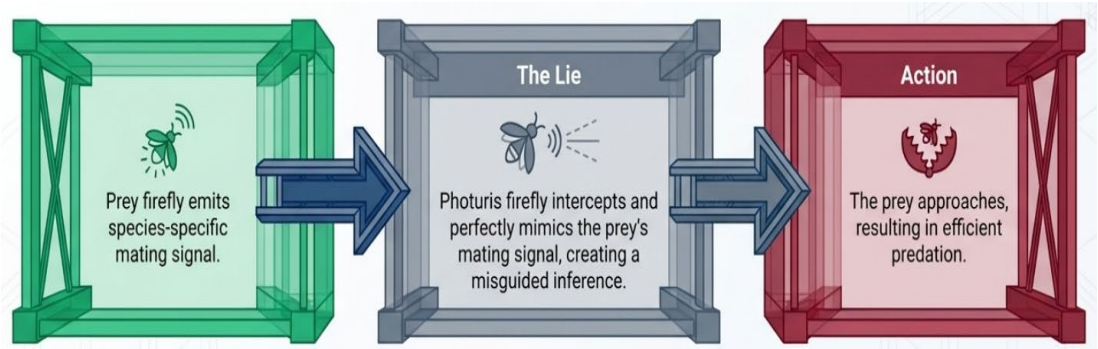


Figure 3. Semiotic Systems as a "Theory of the Lie"

A system is semiotic if it allows for deception. To act effectively in the world, organisms must construct significant surfaces capable of hiding truth. Deception is not a moral failure; it is an advanced, highly evolved cognitive operation requiring immense cognitive resources to manipulate meaning. Furthermore, signs are widely used to deceive in the natural world. For instance, a predator can utilise special signs in order to catch its prey as it is described in the before-mentioned figure dedicated to fireflies. If a system can be used to deceive, it is a semiotic system constructing a reality for effective action.

Umberto Eco noted that the core cognitive problem is understanding how human signs "give account of that which is or construct that which is not.' (Eco, 1976). Cognition relies on semiotic systems to act as the fundamental scaffolding of thought.

Without this scaffolding, we cannot direct our points of view, extend our cognitive reach, or make sense of experience.

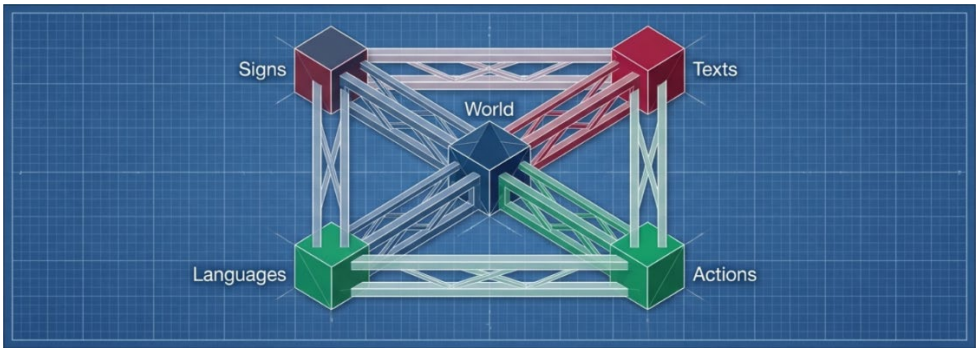


Figure 4. Construction of Meaning

Psychoanalysis reveals that the unconscious is structured like a language. The subject is seen as an effect of the signifier, created through social interaction and inserted into an external symbolic network (Ghosh, 2016). Moreover, findings indicate that most human meaning-making is polysemiotic, combining different systems such as language, gesture, and depiction. This challenges "linguistic imperialism," which incorrectly projects linguistic features onto all other sign systems (Oakley, 2024).

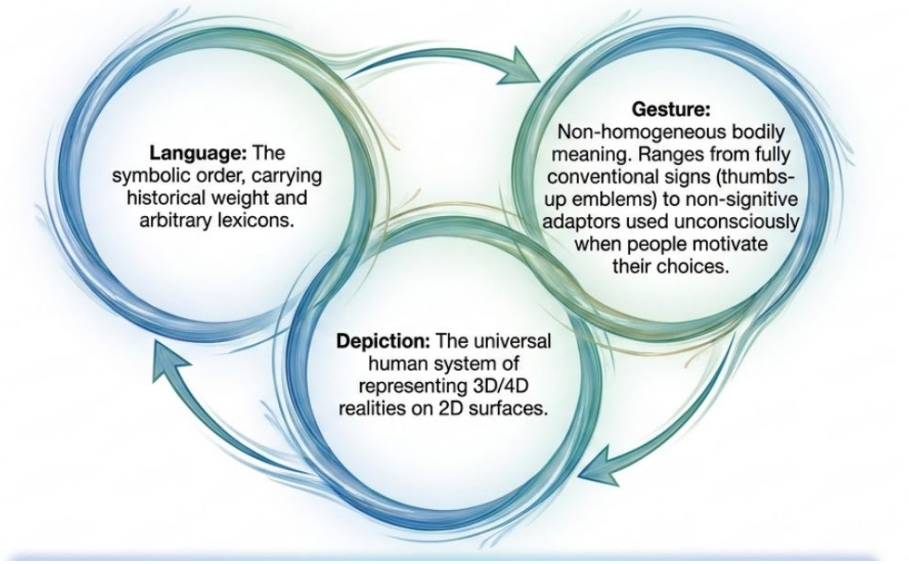


Figure 5. The Polysemiotic Network in Action

Meaning is forged at the intersections of distinct semiotic systems. A subject's meaning-making relies on navigating these systems simultaneously, constrained by physical embodiment and guided by sedimented cultural norms.

4. Discussion

The results suggest that modern psychology must adopt a semiotic framework to address the complexities of 4E cognition (Embodied, Extended, Embedded, and Enacted). By viewing the mind as an enactive form of sense-making mediated by interpretive habits, we can better understand impairments like Autism Spectrum Disorders through semiotic interaction analysis (Paolucci, 2021).

Furthermore, the relevance of semiotics for psychological research is increasing as our environment becomes more virtual and representational. Future studies must address the semiotic interface of human-device interactions to prevent information overload (Michon et al., 2003).

Ultimately, this theoretical synthesis provides a "conceptual-empirical loop" where psychology and semiotics serve as "mutual enlightenment" for understanding the nature of human and non-human meaning-making creatures (Zlatev, 2012).

Cognition is not just an internal mechanism; it is an enactive form of sense-making. As Peirce argued, "The thoughts of a living writer are in any printed copy of his book than that they are in his brain." (Peirce, 1998). Texts, languages, and physical environments are external scaffolds that actually structure how we think.

The mind is extended as semiotic systems (texts, tools, gestures) are not just expressions of thought, they are the external scaffolding that makes complex cognition possible. Language is an external symbolic network that shapes our deepest internal desires, because the Unconscious is intersubjective. The ultimate power of the semiotic mind is not perfectly representing reality, but actively constructing what is not there, enabling imagination, deception, and effective action in the world.

Therefore, cognition is an enactive, sense-making loop mediated by signs. These signs are shaped simultaneously by the practical consequences of our actions in the external world (Pragmatism) and by the internal pressures of our psychic positions (Psychoanalysis).

References

1. Bianchi, C., & Gieri, M. (2009). Eco's semiotic theory. In P. Bondanella (Ed.), New Essays on Umberto Eco (pp. 17–33). Cambridge University Press
2. Brinkmann, S. (2014). Psychiatric diagnoses as semiotic mediators: The case of ADHD. Nordic Psychology, 66, 121-134. https://doi.org/10.1080/19012276.2014.926227
3. Eco, U. (1976). A theory of semiotics. Indiana University Press.
4. Ghosh, M. (2016). Lacan and Post-Structuralism. International Journal of Sociology and Social Anthropology (IJSSA), 1(1), 85–89
5. Husserl, E. (1999). The Idea of Phenomenology. Kluwer Academic Publishers.
6. Iwaszuk, M. (2019). A Psycho-semiotic model of thinking: Combining Klein and Peirce theories of symbols for a more comprehensive model of the mind. Journal of Education Culture and Society, 2019(1), 51–67. https://doi.org/10.15503/jecs20191.51.67
7. Klein, M. (1930/1948). The importance of symbol formation in the development of ego. In M. Klein, Contributions to psycho-analysis (pp. 236-250). London: The Hogarth Press.
8. Liu, Y. (2013). Social Semiotic Multimodal Research: A Meaning-based Approach. (Semiotics and Media), 6, 73–92
9. Merleau-Ponty, M. (2012). Phenomenology of Perception. London: Routledge.

10. Michon, J. A., Jackson, J. L., & Jorna, R. J. (2003). Psychosemiotics: Semiotic aspects of psychology. In R. Posner, K. Robering, & T. A. Sebeok (Eds.), Handbook of Semiotics (Vol. 3, pp. 2722–2758). W. de Gruyter
11. Oakley, T. (2024). Interview with Jordan Zlatev. SKASE Journal of Theoretical Linguistics, 21(2), 181–194
12. Paolucci, C. (2021). Cognitive Semiotics: Integrating Signs, Minds, Meaning and Cognition. Springer Nature Switzerland AG
13. Peirce, C. S. (1998). Essential Papers. Bloomington: Indiana University Press
14. Saller, V., & Schoeller, D. (2018). Cognition as a Transformative Process: Re-affirming a Classical Pragmatist Understanding. European Journal of Pragmatism and American Philosophy, X(1)
15. Stanford Encyclopedia of Philosophy. Jacques Lacan. https://plato.stanford.edu/entries/lacan/
16. Zlatev, J. (2012). Cognitive Semiotics: An emerging field for the transdisciplinary study of meaning. The Public Journal of Semiotics, 4(1), 2–24.