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Abstract: This essay employs Charles Peirce's triadic semiotics in order to develop a biosemiotic theory of life that is capable of illuminating the function of information in living systems. Specifically, I argue that the relationship between biological information structures (DNA, brains, and human languages), selecting environments, and the adapted bodily processes of living organisms is aptly modelled by the irreducibly triadic relationship between Peirce's sign, object, and interpretant, respectively. In each instance of information-based semiosis, the information structure (genome, brain, or language) is a complex informational sign that represents the informational object (the present environment according to the respects in which recurrent features of the selecting environment have proved salient over the course of a history of natural selection); and the bodily, behavioral, mental, or intellectual processes that are organized by the informational sign to more or less accurately interpret the present environment constitute a complex informational interpretant—a living, interpreting organism. The essay begins by discussing the precise sense in which this biosemiotic theory is based upon Charles Peirce's semiotic theory. Next, the theory is developed at length in relation to genetic information structures. Finally, I present a brief outline of how the theory applies to neural and linguistic information structures. The essay concludes with a reflection upon the anti-reductionist implications of the theory.

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