insufficient to criticize those ideals without offering alternative ideals that are clearly incompatible with the eighteenth-century reaction against the Enlightenment.

If modern fascism is compatible with both the Enlightenment and with historical critiques of the Enlightenment, it may be that the problem does not lie with the Enlightenment so much as with the contradictions within fascism. For example, if, as Lang argues, the Nazis knowingly committed evil acts, which they concealed, this in itself suggests that their thinking was inconsistent. Analogously, the Nazi attack on Christian ideals was inconsistent with their use of Christian symbols and values. The simple point here is that contradictions are, of course, compatible with anything. The deeper question is, What kinds of historical conditions and social ideals are least and most compatible with contradictory thinking by heads of state?

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Semiotics can trace itself back to two major sources, and this dual parentage continues to generate confusion about the locus and scope of semiotic inquiry. Continental semiotics traces its lineage back to the early twentieth century lectures of the Swiss theorist Ferdinand de Saussure, who developed a general linguistics that has become the norm for structuralist and, in an ironic inversion, deconstructive theories of sign activity. This tradition works within the binary opposition between signifier and signified, both of which are contained within language. North American semiotics traces its lineage back to the essays of C. S. Peirce, who started in the 1860s to graft his conception of semiosis to a larger metaphysical structure emphasizing continuity and the growth of concrete reasonableness in time. This tradi-
tion works within the triadic correlation of sign, object, interpretant, and is friendly to evolutionary theory. The plot thickens, of course, when it is recognized that semiotic theory is woven into the entire fabric of world philosophy and theology, and that each epoch has made its unique contributions to the understanding of signs. Yet in the contemporary period the great divide still remains between those who would envision semiotics as a branch of linguistics and those who see semiotics as the only proper organon of systematic metaphysics or, on a humbler plane, a unified science of signs.

Thomas A. Sebeok belongs in the latter camp, and has long argued against the conception of semiotics that would tie it too exclusively to human speech. He refers to this limited perspective as a form of “glotocentrism” in which nonverbal forms of semiosis are either ignored or misunderstood. Sebeok wishes to reshape semiotic theory so that it can become responsive to all of the biological and behavioral aspects of sign transmission. Painting on a much vaster canvas than his structuralist cousins, he wishes to honor and acknowledge the sign-using potential in all living systems, from the simplest bacterium to the only known language-using organism, Homo sapiens sapiens. This bold transformation of semiotics promises to remove it from the provincial realm of human utterance and locate it squarely at the heart of nature and its innumerable orders of interaction.

The title of this book of 15 essays is a pun on a line from the popular song, “As Time Goes By,” that became the signature song of the 1942 film Casablanca. A sigh becomes a sign and the world becomes, in the words of Peirce, “perfused with signs.” Umberto Eco has written two essays on Casablanca, as noted by Sebeok, and its unusual pastiche of popular visual and musical images has become something of a semiotic study in its own right. A second echo of the title is, of course, Freud’s perhaps apocryphal statement to his students that “a cigar is just a cigar.” In either case, the implication is that all organic interaction is semiotic through and through, and that it is impossible to understand any life form without acknowledging the sheer ubiquity of sign communication. Implied in the assertion that “a sign is just a sign” is also a form of semiotic idealism (a phrase coined by David Savan) that mutes our concern with the reference relation and focuses on the forms of modeling that permeate the creation of semiotic horizons of meaning. That is, signs are about other signs and not about the “really real” in itself.

Sebeok takes the modeling metaphor seriously. Relying on the biological
and semiotic theories of the Prussian writer Jakob von Uexküll (1864–1944), whose epoch-making 1940 work, *Bedeutungslehre (The Theory of Meaning)*, shaped the emergent field of biosemiotics, Sebeok insists that all sign-using organisms operate out of what von Uexküll called the *Umwelt*. This term can be translated as “environment” or as “milieu.” Sebeok prefers to translate it as “subjective universe” or as “model,” placing the emphasis on how a given *Umwelt* models and shapes the transmission and reception of signs. Messages are encoded and decoded according to a semiotic context that often overdetermines the nature of the signal as it reaches the receiver. The *Umwelt* is thus the private semiotic universe that models all that comes into its orbit.

Sebeok is clear that all *Umwelten* are embedded in a vast evolutionary context that ensures their continuing relevance for the sign-using organism. Each species has its own unique *Umwelt*, and must relate to the larger orders of nature through its subjective universe of semiosis. Survival is intimately tied to semiotic success at decoding. Sebeok states: “Signs have acquired their effectiveness through evolutionary adaptation to the vagaries of the sign wielder’s *Umwelt*. When the *Umwelt* changes, these signs can become obstacles, and the signer, extinct.” (p. 12) If structuralist semioticians still wish to insist on the arbitrary nature of sign systems, biosemiotic theorists stress the link between semiotic adaptability and sheer evolutionary competence. Insofar as an *Umwelt* is merely arbitrary it will betray its owner and bring about sure demise. Signs must be reliable indicators of environing conditions or they cease to have relevance.

Verbal communication is extremely rare in the universe and is a very late evolutionary product. While language emerged as a form of evolutionary adaptation, speech came much later as a product of “exaptation,” a term meant to refer to the process whereby something that evolved for one purpose can be co-opted for a different purpose. Semiotic theories that privilege human speech ignore the more pervasive forms of nonverbal communication that sustain the worlds of organic interaction and have a different role to play in evolutionary utility. Sebeok isolates six key features of semiosis that cut across the verbal/nonverbal divide: “These six key factors—message and code, source and destination, channel and context—separately and together make up the rich domain of semiotic researches. However, the pivotal notion remains the sign.” (p. 16) Any organism will function within these six semiotic dimensions. A simple cell, for example, will transmit its message to other cells via a specific code, using a specific chemical channel within a larger biological context. The
cells in the immune system, for example, are fully semiotic and display all of these features of communication when they work in concert to attack a disease body.

Of course, no message is transmitted without "noise" or some kind of ambiguity. Every sign is subject to spoliation or augmentation of meaning. Sebeok refers approvingly to Peirce's concept of the "interpretant" by which Peirce makes it clear that a sign interpreted is a sign changed. Interpretants are, among other things, enhanced signs. The context within which semiosis occurs shapes the growing web of interpretants. Thus:

Context includes the whole range of the animal's cognitive systems (that is, "mind"), messages flowing parallel, as well as the memory of prior messages that have been processed or experienced and, no doubt, the anticipation of future messages expected to be brought into play. (p. 29)

Temporality and the complexity of accumulated forms of decoding frame the entrance of any new sign into the 'mind' of the sign-using organism. The depth dimension of the context is the species-specific Umwelt that lives between the sender and the receiver, thus shaping the direction and content of communication. For Sebeok communication, no matter how fraught with difficulty and surprise, works against entropy to ensure the growth of order and meaning within biological structures.

On the human level, referred to as the sphere of "anthroposemiosis," semiotic contexts become very complex, and the process of decoding must move through a greater variety of possible forms of encoding and possible semblance. Both Sebeok and Eco point to the phenomenon of the lie as a chief example of how messages can be encoded in a rich and confusing variety of ways. The context of the message helps to shape the strategies used to decode it. Sebeok gives the example of a young boy running into the house to tell his mother that a tiger has just appeared in the back yard. In most contexts this message would be decoded as a lie or a fantasy. Yet suppose the house happens to be next to the winter quarters of a famous circus. This fact adds a new context to the 'same' message, calling for a different type of decoding. Sebeok returns again and again to the ubiquity of context in signal transmission, and emphasizes the difficulties inherent in working through the presuppositions of a context.

In his essay "Indexicality," originally delivered at the Peirce Sesquicentennial International Congress at Harvard University in 1989, Sebeok
expands upon the evolutionary and contextual aspects of sign functioning. In his examination of Peirce's category of "secondness" (brute and dyadic reaction) he stresses the centrality of opposition and conflict in the shaping of a semiotic context of meaning. The relation between a sign and its object is indexical, that is, partakes of secondness, when it involves a direct physical connection such as contiguity or cause/effect. In the realm of anthroposemiosis, indexicality is most strikingly manifest in the shaping of a self-identity through social contrast:

Too, in human ontogenesis, Secondness is a universal of infant prespeech communicative behavior (Trevarthen 1990). The reason for this is that the prime reciprocal implication between ego, a distinct sign maker, and alter, a distinguishable sign interpreter—neither of which, I repeat, need be an integrated organism—is innate in the very fabric of the emergent, intersubjective dialogic mind (Braten). (p. 133)²

The power of the alter ego or the not-me imposes itself on the ego, thereby ensuring that the self will respond to the intrinsic patterns and shapes of the surrounding world. To ignore or downplay indexicality is to fall prey to the wrong kind of semiotic idealism and to act as if signs were mere aesthetic projections onto a nature devoid of shape or texture. Sebeok honors the evolutionary perspective by placing indexicality at the heart of the growth of self-identity in time.

Traditionally, the most cited example of indexicality is the medical symptom pointing to an underlying complex of structures that must announce themselves by indirection. Semiotics was partially inaugurated by medieval diagnostics, and the medical model remains one that continues to influence contemporary theory. All physical and mental symptoms are indexical in nature and have a contiguous and cause/effect relation to their object. In Peircean terms, the symptom, say a rash, is a sign of an object, say an infection, which produces an interpretant, say a diagnosis, that the rash (sign) is caused by a specific disease "X" (object).

Akin to medical diagnostics is the art of detection. Sebeok has long had a fascination with Pierce's concept of "abduction" (retroduction) and has argued that Sherlock Holmes does not use deduction in his case studies but a form of abduction and its sub-species, interpretive musement.³ Indexicality gives material for reflection, while abduction provides general hypotheses (rules) for reading specific cases in unique ways. From our simplest
perceptual judgments to our most complex categorial frameworks we remain sign-using organisms struggling for evolutionary survival.

Structuralist semiotics, not to mention deconstructive perspectives, mute indexicality and thereby overlook the evolutionary structures that empower semiosis. By making indexicality central to semiotics, Sebeok makes it clear that no account of verbal or nonverbal forms of sign transmission can be adequate if it bypasses the phylogenetic and ontogenetic enabling conditions of interpretation. Interpretants emerge from nature and are not free-floating possible worlds any more than they are opaque substances. A given sign is what it is because of the orders of relevance that surround it and give it a horizon of meaning and value.

Sebeok has advanced the field of semiotics by providing a large natural and evolutionary framework within which specific forms of semiosis can be studied. In time, the glotto-centric and structuralist conception of sign activity will seem little more than an idiosyncratic and provincial distortion of the more generic semiotic forces of nature. Yet this signal advance in semiotic theory has its own problematic elements that must be confronted if semiotics is to be truly universal. My critique focuses on the underlying metaphysical assumptions of Sebeok's perspective and the role they play in locating sign activity. This strategy is a precarious one in that it relies on a conception of metaphysics that many semioticians would find problematic in its own right. Yet metaphysical and categorical commitments are inevitable and will always reveal themselves in the subaltern configurations that emerge from any perspective having generic intent.

It should be understood that my disagreements with Sebeok represent a family quarrel, and stem from a similar conception of the nature of sign activity within the world and its role in shaping the human process. The binary linguistic tradition simply does not have the categorical power and subtlety of the triadic and evolutionary tradition derived from Peirce. Consequently, serious work in semiotics will start from triadicity and move outward toward larger orders of interaction and relevance. The binary model (signifier/signified) is far too simplistic to function generically.

The question becomes: What is the role of nature and indexicality in giving shape to horizons of meaning and semiosis? More important, how does nature serve to enable and secure semiosis against entropy and the ultimate decay of meaning in time? Put in other terms, how does an Umwelt emerge in the first place, and how does it attain validity for the sign-using organism? To answer these related questions properly it is necessary to probe into the latent forms of idealism that still cling to Sebeok's enterprise.
There is a tension between the affirmation of indexicality and evolutionary competence on the one hand, and the use of a neo-Leibnizian “possible world” strategy on the other, in defining the subjective and idealistic elements in the Umwelt. Needless to say, nature ‘contains’ possible worlds, if by “possible” is meant pertinent to an actual order. Possibilities surround given interpretants, giving them maneuvering room and goading them into novel actualities for growth and expansion. But it does not follow from this more modest conception of possible worlds that each horizon of meaning, whether an animal Umwelt or a self-conscious human sign system, is a mere model or projection of possible forms of semiosis. Sebeok’s repeated and favorable use of Leibniz should give pause. Leibniz did give semiotics the courage to seek for truly general conceptions of sign activity, but his own metaphysical commitments are deeply vexing to a naturalism that would honor indexicality and secondness. For Leibniz, a possible world is a self-contained and consistent universe of compossible traits seeking instantiation in the actual world. It is as if each possible world hungered to find an incarnation in actuality and to become part of the preestablished harmony. Of course, the conception of possible worlds could not function at all were it not for the conception of nonspatial monads functioning as perspectival and appetitive centers of semiosis. Sebeok must be careful to separate out the generic intent of Leibniz, still to be honored, from his extreme idealism that would reduce all semiosis to a kind of intramonic mirroring. Put differently, indexicality is incompatible with a monadology and its implicit panpsychism.

Nature is not only a “semiotic web” with actual and possible worlds in interaction. It is also a presemiotic realm of potencies that do not issue forth in determinate signs. What is needed is a kind of “ecstatic naturalism” that honors nature’s presemiotic and preformal potencies while giving an appropriate place to natural forms of semiosis. An ecstatic naturalism differs from a more descriptive naturalism in that it struggles to articulate the depth dimension of nature which obtains prior to any actual sign system or configuration of meaning. This is not to say that nature is some kind of super-code awaiting a proper reading by semiotics, but that it is the ultimate enabling ground for all semiosis and, in its depth dimension, remains just beyond the reach of semiotic theory. If Leibniz made the world too transparent, thereby denying the brute and often opaque qualities of secondness and indexicality, ecstatic naturalism allows for genuine opacity when and where it is relevant.

Peirce himself left a complex legacy insofar as he stressed both second-
ness and a kind of panpsychism ("matter is effete mind"). Sebeok lives within these tensions, thereby honoring one of his sources, but often tilts too strongly in the direction of an idealism that would, ironically, fail to honor the utter sovereignty of nature and its depth dimension. Semiosis is a product of natural order, and semiotic orders are unique in that they survive, however briefly, in the face of entropy and the utter indifference of nature. The innumerable potencies of the world sustain natural semiosis and goad interpretants into novel and augmented configurations. There is an abyss of difference between a crypto-monadology and its implied panpsychism and an ecstatic naturalism that understands the dark rhythms of the unconscious of nature. Semiotic theory must purge itself of its last vestiges of idealism if it is to enter into the draft and power of nature.

The Umwelt is what it is not because it is a "model" or a "subjective universe" but because it is an eject from the heart of nature. The contour of any given Umwelt is a product of innumerable "seconds" that give it a specific sphere within which to obtain. Put differently, each Umwelt assimilates the shocks of the world and responds to them accordingly. Whatever shaping or modeling it does, it does out of a prior response to its other. Nature spawns more offspring than it can sustain, and survival depends on the depth and subtlety of awareness to antecedent and surrounding conditions. It is more accurate to say that Umwelten are modeled by nature than that they are models in their own right. Nature is always more than can be known by sign-using organisms, be they semioticians or not. A proper metaphysics of nature locates semiotics within its more generic categories and preserves the dark unconscious of nature from an invasion that would import far too much transparency into a realm forever beyond the reach of the semiotic web. By the same token, semiotics would learn the natural piety that comes from a deeper sense of the mystery of an ecstatically self-transforming nature.

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NOTES

1. For an excellent study of Jakob von Uexküll, see the special issue of Semiotica, Vol. 42, No. 1, 1982, guest edited by Thure von Uexküll.
2. Sebeok refers to these essays: Trevarthan, Colwyn, "Signs Before Speech," The Semiotic