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Cowley, Stephen J.

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Stephen J. Cowley\*

# Living the duty of care: languaging in semiotic fields

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**Abstract:** New hope can draw on anti-humanist duty of care. Turning from debate about how one *ought* to act in discursively produced “realities,” Paul Cobley advocates a bioethics of living in semiotic fields. Thanks to observership, humans can make good use of both the known and how *things appear as signs*. For Cobley, the latter are “mind independent.” Once deemed *real*, semiosis can unite the lawful, the perceivable and, at least, some of the unknown. However, skeptical as I am about metaphysics and mind, I shift the focus to languaging in semiotic fields: human perceiving, doing, and saying entangle languaging with nature’s simplex tricks (Berthoz, Alain. 2012. *Simplicity: Simplifying principles for a complex world*. New Haven, CT: Yale University Press). An ethical dimension runs through how we feel, speak and, thus, actualize practices. The duty of care, the known, the knowable, and the unknowable unite in *thingishness*. What appear to us as signs ensure that perceiving-acting can draw, at times, on fictions and, at others, precision tools. Humans tether sense to wordings as, without end, we actualize practices. Stories bring ethical awareness to attitudes, action, and the due care that shapes understanding and response to institutions. In offering a distributed perspective on language, one makes possible an ecolinguistics that works for life-sustaining relations between humans, nonhumans and what we call “things.”

**Keywords:** anti-humanist; bioethics; distributed language; ecolinguistics; ethics

“Human semiosis is the field constituted by movements to and fro between the mind dependent and the mind independent.” (Cobley 2018: 27)

## 1 Introduction

As I write, wars ravage North Africa, Yemen, Ukraine, and elsewhere; famine is rife, migration increasing, and ever-larger areas are ravaged by the climate

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\*Corresponding author: Stephen J. Cowley, University of Southern Denmark, Slagelse, Denmark, E-mail: cowley@sdu.dk

emergency. As unipolar “globalization” collapses, debt owed to the West and China cripples much of the South. Loss of biodiversity attests to accelerating ecosystemic collapse. Many seek hope. Many reject an “order” where the future of evolution is *not* subject to the control and flow of markets that work for growth. In an understated way, Stibbe (2015) urges “new stories to live by.” Concurring, I present languaging, and natural innovation, as able to offer stories that create hope, change attitudes, and enable practices that mitigate catastrophe. Stories, as in the epigraph, can draw on a “to and fro between the mind dependent and the mind independent” (Cobley 2018: 27). In interrogating “human semiosis,” I address signs, how they are made, and, thus, what is *not* constituted by observing. Dubbing this *thingishness*, I pursue how change draws on signs. This has practical importance because, to enhance life-sustaining relationships, practical action needs stories that can benefit humans and nonhumans alike. One can imagine a quality alternative to a “good life” fueled by economic growth, ecosocial inequity, and the climate crisis. In China, the constitution commits to building ecological civilization and, in practice, many seek to link ancient traditions with the technosocial (Huang and Zhao 2021; Pan 2016). In much of the world, where similar stories are lacking, progress is patchy and localized.

Inspired by Paul Cobley, friend and sparring partner, I too trace ethically driven response to events. These can connect stories, feeling and action “to enhance survival chances in an Umwelt that is threatened by despoliation” (Cobley 2014a: 222). By looking beyond the mind dependent, we acknowledge “the limits of human agency and its continuity with the agency of other organisms on the planet” (Cobley 2014a: 222). In the same spirit, others say: “the fight for adequate climate practice and policy is at the same time the fight for social justice and equality throughout the world” (Jones and Magalhães 2020). Denouncing the association of schooling with prosperity “as a lie,” the authors bring Paolo Friere’s critical view to “contradictions and conflict between the ideas and points of view being discussed.” In adding semiotic concerns, Cobley emphasizes ethical response to events. Since this informs understanding, I place natural innovation at the core of living, languaging, and human practices.<sup>1</sup> This distributed perspective can, unite a duty of care, stories, information, and perspectives that aim at transformative effects. Emplaced experience shapes even “intricate organization of argumentative speech that constructs a new shared meaning” (Jones and Magalhães 2020). The smoke and mirrors of social “reality”

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<sup>1</sup> Shapiro (2011) cites cases like natural genetic engineering in presenting “natural innovation” as the central challenge to 21st century biology. I prefer to use it as a neutral label for the new, whether ascribed to semiosis, organic-coding, sense-making, structural coupling, languaging, or, most generally, *physis*. By definition, none reduce to the closed function of parts and process.

can be dispelled by careful ethical responding. Rather than trust discourse and technoscience, one starts in the thick of things, where events demand that human agency be “compelled into compromise with circumstances” (Cobley 2007: 79).

## 1.1 Overview

In privileging semiotic fields, in Section 2, I reject folk conceptions and linguistic or sign views of “language.” Rather than divide linguistic “objects” from people, human feeling, acting, and speaking all contribute to living in semiotic fields. Languaging unites circumstances, living landscapes, and, thus, epistemic concerns. In Section 2.1, I trace the inertia of global politics, in part, to how sign views of “language” reduce ethics to issues of discourse. In calling for action, an anti-humanist ethics begins with being seized. In semiotic fields, events set off languaging and, thus, ethical responding. Since this can engender the new, for all our limitations, we *can* change the possible. In Section 2.2, taking an agnostic stance to the ontology, I address what Cobley calls the “mind independent.” In Section 2.3, I show how experience distills the new in “pro-optative” acts (and use of wordings). Hence, desiderata draw widely on things that are *not* mind dependent. In Section 3, I disentangle semiotics from causal powers by showing how non-semiotic things inform the activity of languaging. In Section 3.1, I illustrate how prosody brings an ethical edge to the fore. For this reason, there are gains in placing languaging in semiotic fields. In Section 3.2, I link this to causal powers, science and its limits. Although I remain agnostic about a semiotic realism, I adopt the core insight that living beings draw on things we can describe as signs (as part of living nature). In conclusion, in Section 4, I favor semiotics over semiosis. By focusing on semiotic fields, I suggest, one can pursue what binds the known, the knowable, the unknown, and the unknowable. One thus brings observership to the fore and gains some hope of averting catastrophe.

## 2 There is no “language” in semiotic fields

In all dimensions, life draws on semiotic fields. While the term was coined to bring semiotics to nature (Nöth and Kull 2001), it can expand *ens reale* (Deely 2005, 2010). As Cobley (2007) notes, the biosphere and the physical can be treated as a single system. In expanded semiotic fields, what Kull calls semiotic practice includes the “behavior of organisms including the behavior of humans” (Kull 2009: 84). For some, these arise as nature draws on likenesses (Markoš et al. 2009), and, in each cell, metabolism uses organic codes (Barbieri 2015). As in

Sebeok's work, "semiosis and life converge" (Petrilli and Ponzio 2008: 25). However, unless qualified, such claims run the risk of separating living from life and, thus, how signs can appear. In semiotics, such an approach appears incompatible with embracing not only signs, but "other things besides; things which are unknown to us at the moment and perhaps for all our individual life" (Deely 1994: 11, cited Cobley 2018: 40). The point is crucial because, in semiotic fields, we experience real causes (see Ritz 2022) or, oddly, signs function both as, and also like, things. They prompt us to understand and to gain a grasp of what (currently) could be the case. Further, while such fields encompass all living systems, humans can also track their changing potential (including what can give rise to novelties).

Natural innovation enables "social realities" that draw on discursive products. Yet, if anthropomorphism is assumed, they omit how human judges and movers change and are changed by semiotic fields. Their realities reproduce the buzz of cities, the hum of data, and, further out, the cutting of chainsaws and the din of tractors. In natural landscapes, practices serve communities of observer-participants who, in enlanguaged worlds, engage with fellow beings. Although human powers are enhanced by organized practices, these depend on events in semiotic fields. A history of emplaced activity and its results, lives and stories, bring a basis for shaping future happenings. The results disclose things, persons, events, situations, and selves that, in a cliché, *make sense*. Just as humans enact life's unfolding, so it is with "language" or, better, how semiotic fields bring sense to verbal, vocal, and visible expression (e.g. writing). These means, too, use the emplacement of activity: humans draw on the discursively informed (and mundane worlds) as they feel, act, perceive, attend, and notice while concerting activity in the flux of to-and-fro.

Given how the pasts of others perfuse the mundane, reality "cannot exist as a settled phenomenon divorced from observership" (Cobley 2018: 23). Inspired by Wheeler's (1994) physics, Cobley uses relativity theory in sketching how signs inform knowing. In a participatory universe, what stands "on the other side" of knowing is disclosed by observing. In Deely's (2015) terms, the suprasubjective enables signs to have real effects. Once observed, they change the becoming of things. The view uses pragmatist realism to reject empiricist ontology. In Vetter's (2020) terms, following Hume, many ascribe "all there is" to "an arrangement of qualities." On an anti-Humean view, by contrast, cognition reduces to neither brains nor organism–environment coupling. Humans and nonhumans alike come to know as they connect with the *unknown*. They use change that unfolds in many rates: the results reduce to neither neural activity, affordances, a closed "world," computation, or systems dynamics. Rather, in semiotic fields, observership brings new multiscalarity to living. For humans, things, events, situations, selves, others,

and even molecules can appear as signs of the already lived, history, and potential. Past events resonate as persons anticipate, perceive, and embody rapid events and feelings that Berthoz (2012) describes as *percaction*. Later, I show how, in *percacting*, prosodic flux brings the ethical to doing-and-talking. Observership attunes to what Cobley deems the “mind independent.” While the description has great generality, it allows things to draw on signs as the unknown bears on living. Not only do humans use wordings to ascribe meaning to everything under the sun but, in so doing, they enable incremental changes in understanding. Pursuing this insight, Cobley uses a cybersemiotic view where observership draws, in part, on unknown changes (Brier 2008). Whereas Brier *presupposes* semiotic ontology (or pragmatic realism), I choose to adopt an agnostic stance. Hence, I treat semiotic fields as including the non-semiotic and, thus, the intermental (Vygotsky 1978), communities of practice (Wenger 1998), use of habitus (Bourdieu 1991), and, indeed, a meso domain of organized activity (Secchi and Cowley 2021). However, much is gained by digging deeper than in social theories. First, appeal to semiotic fields avoids anthropomorphism. Second, even if limited to a person’s observership, the phenomenon depends on how humans and nonhumans act while linking the unknown with what physics describes.

For the folk, “language” is a domain of little things such as words and rules. Once babies say things, they are alleged to use intentions, communicate, and, later, do things with words. In cultural and individual ways, they link propositional attitudes (whatever they are) with linguistic skills. Avoiding such views of “language,” Cobley (2014b) joins Harris (1981) in rejecting the language myth. For Cobley, this “millennia old practice” (2014b: 39) vitiates both folk views and the many schools of “segregational” linguistics. Even today, many linguists presuppose mind-to-mind communication (“telementation”) and/or knowledge of fixed codes. As Harris (1996) puts it, “language” is “seen as one thing and what people do with it (or with them) another” (Harris 1996: 14, cited Cobley 2014b: 39). They treat “language” as manifest as “use” that can be modelled and applied by artificial “languages.” For Cobley, then, “language” leaves out how our powers draw on semiotic fields. A human infant links knowledge of “language,” with acting/talking as an observer-participant who uses ways of perceiving, feeling, acting, understanding, and speaking. Given observership, the embodied to-and-fro prompts the mind dependent to draw on the non-semiotic or mind independent. While the verbal can be *described* as “language,” words and rules are “second-order cultural constructs” (Love 2004, 2017). Like rituals, chronologies, or clocks, they act as constraints on activity that, at times, relate to what is inscribed in artifacts (e.g. as alphanumeric patterns).

Appeal to observer-participants aligns with long suppressed appeal to *languaging*. In the sixteenth century, the term was used, for example, of how

schoolboys learned Greek and Latin (Cowley 2019; Mulcaster 1582). With a modicum of understanding, they use *linguaging* to construe foreign characters. In other terms, a child could use the vernacular together with inscriptions to generate a sense. Rather than telementate or use fixed codes, the child seeks a desideratum by rendering aloud. As constructive public activity, linguaging eludes models of mind and society (both of which assume a macro–micro divide). Following repeated returns (see Cowley 2019), *linguaging* entered the academy toward the end of the last century. Its adoption is due to, above all, Sellars (see 1960; Seiberth 2021), Becker (1991), Maturana (see 1983, 2002; Raimondi 2019), and Swain (see Swain and Lapkin 2011). All oppose the language myth – linguaging needs no codes or telementation. As Becker suggests, “There is no such thing as language, only continual linguaging, an activity of human beings *in the world*” (Becker 1991: 34). While perspectives vary, linguaging acts as a symbiosis of two “orders” (Cowley 2017; Love 2004, 2017). Given coordinated embodiment, the “first-order” arises as people move, hear, look, and act as they engage with each other, documents and machines. In activity, they actualize practices that bring feeling, behavior, and understanding under partial “second-order” control (as verbal patterns complement use of norms and artifacts). In history, the results stabilize a symbiosis between the orders and, thus, bring new temporalities to human activity. We can be absorbed in a game, use Greek and Latin, or, indeed, bring a duty of care to imagined futures. Uniting the orders, linguaging is *activity in which wordings play a part*. Mundane acts of utterance are sculpted by “usage” (at a population level) that is integrated with what can be called intra-acts, semogenesis, and, as Berthoz suggests, how perception shapes moving and judging. As nonce events, wordings take on a verbal aspect where patterns resonate as speakers, listeners, readers, etc. bring their pasts to attending, doing, and understanding. Linguaging meshes history (and linguistic/conceptual change) with embodiment or, in Cobley’s terms, the to-and-fro uses the mind dependent (roughly, ‘thinking’). Linguaging invites description around signs and, thus, enables willful use of wordings to disclose how things appear (“interpretation”).

Leaving aside folk and linguistic models, Cobley invokes the interplay of verbal (i.e. wordings as pattern) and a verbal activity (including nonce aspects of wordings). Rather than pursue linguaging, he highlights semiosis. The verbal is a “symbolic” thread in a to-and-fro that is also iconic and indexical. As on a distributed perspective, acting, feeling, perceiving, and understanding contribute to living. Like Deacon (1997), Cobley treats humans as *the symbolic species*. Accordingly, symbols are *known* to individuals in ways that allow a non-Cartesian mind (or consciousness). Thus, for Sebeok (1988), Deely (2010), Kravchenko (2011, 2021), Cobley, and others, symbols ensure that “the human possesses a

self-consciousness about the signs s/he uses” (Cobley 2007: 77). Not only *are* there symbolic signs (i.e. real causes) but, given a suprasubjective domain, they enable knowing. Hence, while emphasizing the “avermal,” Cobley concurs with Deely (2010) that, unlike a cogito, consciousness allows an incremental grasp of the symbolic. Rather than posit any such abstract meaning, others reject “mental gymnastics” (Chemero 2011). This allows for a languaging view where, as a result of doing and saying, percaction informs how wordings draw on usage (or Love’s 2017 second order). In languaging, there is only repetition without repetition or, alternatively, the new uses patterning and likeness (see Markoš et al. 2009). Hence, this is the rub: while Peirce and Cobley seek a non-Cartesian mind, like Ryle (2009), I concur with Chemero (2011) that mind is a concept (hypostatized by philosophers). Next, I relate this to the duty of care and, later, return to why I focus on events in semiotic fields.

## 2.1 Seized by events

Ethics are often treated as knowing how one *ought to* act. Commentators identify what enables an individual, community, and/or institution to gain (or possess) knowledge of what is “incorrect” (or correct). To act ethically is thus to meet discursive standards. As in law, a dichotomy between what is and is not correct assumes a sign view of “language.” Just as an act may be “legal” (or not), what a person believes, says, or does may be “right” (or not). The distinction is ascribed to “language” and, in various senses, to “context.” Even if the logic is naïve, the view is common. For example, as part of a pro-environmental agenda, an article in *The Guardian* (2022) reports the European Commission’s vice-president, Frans Timmermans, as saying: “We are killing species at an unprecedented rate. And killing those species will make our survival less likely. If we can get that concept into people’s minds more broadly, I am sure politicians will have to react to people’s outcry: ‘Well, fix this before you kill us.’” The words actually spoken imply (among other things):

- We know that killing species may threaten humans.
- People need to get the concept into their minds.
- If people make an outcry, politicians may act to fix the problem.

Alongside the pronouncement that “we” kill whole species, the vice-president’s words are revealing. In the first place, for Timmermans, political action uses, not what is right, but, rather, public outcry. Second, he implies that an unprecedented rate of killing is wrong, not in itself, but because “our survival” becomes less likely. He links political action to anthropocentric, utilitarian discourse and a



need for public outcry. The logic is voluntaristic: we *choose* to kill species and, once we get a concept “into our minds,” we can *choose* outcry. Then, if so inclined, power can *choose* to act. Politicians act ethically if, and only if, the results align to public discourse about what is right (or not). For Cobley, the world could be different. With Engels (1946/1886, cited in Cobley 2007: 73), he regards voluntarism as a myth. As Cobley notes, it is contradictory to reduce ethics to a moral system and, at once, to evoke individual or social will. The view assumes an “ahistorical” and “complacent” theory of knowledge (Cobley 2007: 74).

In order to do better, Cobley extends the other-oriented humanism of Ponzio et al. (see 2006). In all their work, “semiosis and life converge” (Petrilli and Ponzio 2009: 150). Human self-consciousness imposes a duty of care on a humanism of the other. However, rather than begin on a “plane of discourse” (Cobley 2007: 74), one can turn back to semiotic fields. From here, it is *intrinsically* wrong to kill species at an unprecedented rate – we feel this *as* we think. In the thick of things, responsibility *demand*s care for the living. In Peircean terms, while immanent in the sign it remains external – human agency must “compromise with circumstances” (Cobley 2007: 79). For Althusser and Balibar (1970), such an *anti-humanist* ethics grants “man” no essence. As Marx would say, moral systems and “reality” stem from control of the means of production. Even if one rejects the analysis, practices unite people, things, and institutions: discourse has, at best, a part in “social reality.” Hence, living in a semiotic field can set off a “truth” as one feels, observes, or draws on wordings (and discourse). In Badiou’s (2001) terms, one is *seized by events*. Acknowledging that the view requires refinement, Cobley uses it to reject an ethics of voluntarism. A sense of what is right uses, not the *cogito*, but observership and experience or how, as part of nature, we experience responsibility. The view also challenges individualism or, as suggested elsewhere, is bioecological (Steffensen and Cowley 2021).<sup>2</sup> It demands an ecosophy (see Stibbe 2021) or a moral approach that, in ecolinguistics, brings enjoyment and understanding to striving for life-sustaining relations. In China, it connects ecological civilization with an ancient philosophy of human and natural harmony (see Huang and Zhao 2021). Elsewhere, it appears as Stibbe’s (2021) ecosophical motto: “Live!” Natural inclusion brings judgement to events and thus challenges authority. Here, Cobley identifies a third danger – universalism. Circumstances vary from moment to moment, and so one must avoid checklists of universal (or national) values. In rejecting voluntarism, individualism, and universalism, an anti-humanist ethics puts “language” in its

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<sup>2</sup> Whereas semiotic fields bring forth what appear as signs for living creatures (as observed by humans), bioecologies arise from a third person “observer” view where things that appear as signs can draw on non-semiotic parts, procedures, and modes of organization or plant–animal–human–cultural formations.

place. Doing the right thing is, above all, a matter of responding, acting, and linking a critical grasp of the unknown with events and the facts of the matter. It is only once one is seized that, given circumstances, one can formulate what may be right.

Ethical “language” is often overplayed: public outcry can be manipulated by media use of experts and data sets. Using transparent evidence and argument (i.e. appeals to “language”), opinions reflect the concerns of technoscience, finance, and economics. Yet, as shown by COVID-19, war, or famine in North Africa, macro-models overlook change, contingencies, and the unknown (or “risk”). Hence, their “language” often serves only to legitimize certain interests. While undoubtedly a lie that education can lead to a prosperous life, the market demands prosumers. The young are trained to value products and pass on stories that earn the rewards of choice, sport, tourism, fashion, fine dining, etc. Especially in democracies, as De Beaugrande (1999) stresses, inclusive theory sustains exclusive practice. While acknowledging problems – wars, famine, ecological degradation, etc. – solutions are to be found by a global community of experts who:

- collect data
- make models
- understand the facts/assess risks
- report options
- choose between scenarios
- define problems
- propose solutions
- implement outcomes
- etc.

Ethics are conspicuous by their absence. Given inclusive theory, “language” tends to sustain global institutions even if they degrade human and nonhuman living. Indeed, destruction of ecosystems and human communities is cloaked by discursive values that include, for example, *free trade*, *democracy*, or *rule of law*. By ignoring semiotic fields, social reality highlights the macro concerns of growth-led economics and technoscience. Given their dominance, expertise, data, and policy are increasingly directed as such issues. The status quo seeks evidence to justify decisions by mesmerizing displays of social “reality” that set off outcry (and distracting debate). Conversely, an anti-humanist ethics begins with events in semiotic fields. It builds on how humans and nonhumans respond in thought and feeling. Once one treats “language” as an abstraction, one leaves behind voluntarism, individualism, and universalism. One senses how much we do *not* know about humans, nonhumans and thingishness. Our limitations challenge “science” to work for ecosocial equity and life-enhancing relations. By drawing on observ-ership, we can change ourselves, our attitudes, and how we actualize practices. An

anti-humanist ethics can therefore nurture positive action, create new stories, and, thus, alter both languaging and practices. With this in place, I return to implications for semiotic theory and, thus, what lies beyond that which we (believe we) know.

## 2.2 Beyond the mind-dependent

Hope arises in striving to change ourselves, others, and our languaging by using natural innovation. Rejecting anthropocentrism, we can use what is *not* mind dependent (or known) to direct change. For Cobley, this “to-and-fro” enables physics, biology, law, or semiotics to present versions of the world (c.f. Maturana’s [1988] objectivities “in parenthesis”). Thus, while semiotics pursues life, it also seeks the world’s essence – what eludes the mind dependent, data, and models. For Cobley, the key lies in how observers, things, events, and situations are perceived as signs. In some sense, they are mind independent. The intuition seems to build on a folk view of “mind” that, like the “language myth,” grounds millennia of practice. For a Rylean like myself, however, “mind” captures not inner gymnastics, but a network of practices that stabilize individual, social, and institutional knowing. Indeed, for Cobley too, “mind dependent” knowledge is socially sanctioned. Yet, like Poinot and Deely, he also thinks that, given semiosis, human self-consciousness uses symbols that index the mind independent. While all animals use a primary modeling system (or how the a verbal brings forth a world), humans *know* that there are signs. Causal effects use signs that are *real*. In its symbolic aspect, language gives humans a dual heritage (Cobley 2016) that reveals nature’s order or Poinot’s *ens reale*. For Cobley, within a vast environment of semiosis, what language discloses or, the mind independent, grants humans semiotic consciousness.

Yet, if “mind” is a concept, the “mind independent” is a metaphorically “higher” concept. Viewed thus, it seems unlikely that lower-level events draw on a “reality” that is independent of mind. The known is no more “below” the unknown than the contrary: rather, one can deny that “all there is” reduces to “an arrangement of qualities.” As for Wheeler (1994), the anti-Humean point is that observership does not reduce to sense-impressions (see Deely 2015). Hence, expanding the known demands participation and innovative powers. Rather than turn to “consciousness,” one can offer an alternative. Many mammals exhibit wide cognition (Wilson 2005) as, for example, they seek signs of water or prey (i.e. semiotic fields *enable* intelligent and even directed activity). In hominins, collective life (Donald 1991) transformed human powers as we developed artifacts, institutions, and practices: in perceiving things as signs, we learn in

groups, co-act, and, at times, extend the known. We use distributed agency or, alternatively, how material engagement (Malafouris 2019) informs events in distributed cognitive systems (Hutchins 2014). The peculiarities of human agency come to the fore in Ronald Giere's (2004) discussion of how the Hubble served science. Persons, or "human cognitive agents," use technology (and practices) to bring the distant universe within reach. Computer-generated images shape outputs that are selected and re-used (viz. as signs). A human cognitive agent, the astronomer, uses natural innovation, expertise, and contingency. In terms of this paper, she acts as an observer-participant who brings intuition (and feeling) to events triggered by a wide system's cognitive outputs. Hence, agency is distributed socially, across artifacts, and over time. In using the Hubble, the human's role is secondary in that the equipment exerts tight constraints on what can be seen. While images are what *we* see as signs, they arise as systems compute, measure energetics, and code (meaningless) information. Thus, reversing Giere's emphasis, Cowley and Gahrn-Andersen (2022) stress how an astronomer sees an *indicator* of red shift in a fleck that appears in an image from space. Seeing a dynamic sign reduces to neither direct perception, sense-making, *a priori* content, nor mental gymnastics. Rather, it arises in being seized, or noticing, *something* in the world of astronomy. Using distributed cognition, and contingencies, a trained astronomer picks up what *could* be red shift. Although, they do not know *how* they do this, in Cowley and Gahrn-Andersen's (2022) terms, they *simplexify*. They use what appears as a sign. But what is the pixelated fleck? In that it is computer-generated, it is neither mind dependent nor a pure relation. And yet, it is not mind *independent* either (viz. it depends on noticing and, drawing on various pasts, recognizing that can be described by signs).

### 2.3 Semiotics proper

Semiotics allows for real causation, as, in Deely's (2015) terms, signs pervenate from the suprasubjective. Humean "causation" is replaced by how observership draws on mind independent signs. In Peircean realism<sup>3</sup> (see Ritz 2022) as Deely suggests (2015), signs reveal a real unknown. As Cobley would argue, noticings can lead to correct perceiving. Paraphrasing Bruner (1973), a person uses signs to go beyond the information given. Metaphysics aside, as red shift shows, noticing

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<sup>3</sup> Ritz (2022) stresses that real causation makes the real irreducible to the observable and is, thus, at once a metaphysics of causation and an ontology. Below, my concern is with how he connects an ontology to the view that the appearance of signs indicates real causes.

transcends mere sense-impressions. So let us turn to a famous case of innovation. Reporting (or recalling) watching an ant on the beach, Herbert Simon writes: “Viewed as a geometric figure, the ant’s path is irregular, complex, hard to describe. But its complexity is really a complexity in the surface of the beach, not a complexity in the ant” (Simon 1981: 51). In Copley’s terms, the ant sets off a fro: a mind independent ant shapes a mind dependent hypothesis. Ants, Simon infers (or abduces), use mechanisms that, in his view, are mind independent or objective (Wystrach [2013] offers another story). Hence, Simon’s ant can be used in various ways. In reaching beyond the mind dependent, Roy Pea treats the ant as showing distributed (or “wide”) intelligence. It arises from how we use what we perceive “to shape and direct possible activity emerging from desire” (Pea 1993: 49). Perhaps, like an ant, “desire” qualifies as mind independent. In one sense, indeed, I desire a reader who imagines Simon’s ant and, thus, re-evokes a to-and-fro that is not “mind dependent.” At very least, the zigzag of the ant on the beach uses unknowns. Not only does it set off more than sense-impressions (or affordances), but it permits observership. In standard terms, as a sign, the ant prompts context-free “language”:

- The observer (or imager) of the ant exhibits detachment.
- Given observation/imagining, description transcends the mind dependent (as written discourse or, strictly aggregated alphanumeric patterning).
- In reaching beyond initial observership, one can treat the signs as emblematic wordings and as “pro-optative” or thus, loosely, “symbolic.”

The ant brings the unknown to future thinking (e.g. via a link [or colligation]) that can be based on appeal to cognitive simplicity, distributed intelligence, or the mind independent. In this sense, the use of wordings is *pro-optative* in that, over time, applications are channeled in a certain way. While allowing abductive inference, they bring stability to semiotic fields. A way with wordings (or a pattern in the data) can be a sign for those who use training, models, and a field of use to adjust their knowing. There is nothing odd with such a view: economics, astronomy, and semiotics all use pro-optatives, acts, data, and models to test hypotheses. They vary on how to conceptualize the “real.” As Maturana (1988) suggests, fields construct an “objectivity in parenthesis” (e.g. biology or economics).<sup>4</sup> In semiotics, by contrast, appeal is made to a future-oriented “community of observer-

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<sup>4</sup> He opposes this to how all living systems engage directly in “objectivity without parenthesis.” We need not be detained by the striking fact, as in semiotics, he reasons negatively by positing one kind of relation (mind dependent or structural coupling) opposes what it is not (mind independent or languaging). To Maturana’s credit, he builds this into what Raimondi (2019) calls a bio-logic of languaging.

participants” (Sebeok 1991: 48, cited in Cobley 2018: 29). Observership is taken to prefigure future knowing. Combining observership with semiosis suggests, for Peirce (1868), that, “from our own existence (which is proved by the occurrence of ignorance and error) that everything that is present to us is a phenomenal manifestation of ourselves” (Peirce 1868: 148, cited in Cobley 2018: 41). Confronted with such a view of the real, I prefer to be agnostic.

Noticing the ant on the beach while making pro-optative use of wordings need not attest to future knowing. The event may arise, rather, from what Simon, Pea, the reader, and others have *already* lived. We adopt *ways* or, for Peirce, take habits that bring multiscalarity to wordings, brain activity, and organism–environment relations. In semiotic fields, unthought collocations or “ideas” change incrementally (as likenesses). Simon’s noticing and/or imagining of an ant’s zigzags shapes these ways with wordings. In Sellars’s (1960) terms, languagings bring isomorphisms (see Seiberth 2021) and what, echoing Wittgenstein, he calls picturings.<sup>5</sup> Like the fleck that indicates red shift, the ant is emblematic; in naming its significance, we *simplexify*. Although everything can be described in terms of signs, wordings help us to reach beyond sense-impressions. Like nonhumans, we draw on peracting to achieve causal effects by using things that appear as signs.

### 3 The constitution of semiotic fields

Even if the “semiotic field” was posited by semiotics (Nöth and Kull 2001), the term can unite the semiotic with the non-semiotic. While agnostic about the mind independent, I agree that humans and nonhumans sensitize to *more* than things appearing as signs. Having expelled “language” from lived fields, one asks how hominins mesh the verbal and averbal (i.e. as languaging). For this reason, it is striking that, in seeing the fleck or watching the ant, nothing is said: knowing begins with an actual ant or a computer-generated pattern. Yet, we also imagine them and, indeed, can use Pea’s (1993) “desire.” Even if agnostic about the mind independent, the non-semiotic includes many kinds of *thingishness*. Nature allows multi-faceted diversity. Consider a lived case that shaped an early version of these inscriptions. At a certain moment (last summer), I felt the stickiness of my arm, and, in the noticing, a covert wording emerged. I experienced its emplacement on a *plastic* tablecloth. Responding to heat evokes a *wording* that “explains.” What

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<sup>5</sup> Sellars’ notion derives from critique of “picturings” in the *Tractatus* – rather than link these to facts (e.g. as used to envisage how a car crash happened), he turns to emplaced events (which include the unknown).

begins as a sign (stickiness) is resemiotized as pattern – PLASTIC. As an observer-participant, I bind attending into traces written as block capitals. Not only do signs have causal powers but, in this case –remarkably – they alter my sense of *plastic*. My arm feels *plasticity* in a new, literal sense that is associated with smell.<sup>6</sup> In Sebeok’s (1988) terms, I adjust my primary modeling system or, in Maturana’s (1983, 2002), languaging uses structural coupling to set off new connotations (see Raimondi 2019).

The perduring PLASTIC (as I experience “literal plasticity”) binds a noticing to subsequent inscription. Indeed, such cases may have made Peirce regard it as absurd to dismiss real causes (Ritz 2022). While aligned to an anti-Humean stance, they do not, I think, make “semiosis” mind independent. Rather, as with the ant on a beach, *inscribing* PLASTIC is pro-optative. It brings indexical (and other) senses to a wording. By implication, *thingishness* subtends both what appear as signs and, even six months later, what they evoke (“the smell of plastic”). The argument is not new. In claiming explanatory power for generative grammars, Chomsky (1965) invokes new thingishness. Something like a physical symbol system (a rewriting system) “must,” he thought, produce the infinite finitude of sentences that he defined as a “language.” Even if the view is dated, statistical “thingishness” allows deep learning to generate sentences that constitute texts (see Floridi and Chiriatti 2020). Plainly, what is *not* mind dependent has variety. Actual and imagined ants and desires occur with non-perceivable patterns and pattern makers. Indeed, just as one can ask what defines possible languages, one can invoke all possible pattern makers. This applies even if they lie “outside” semiotic fields (and perceiving). In parallel, Dennett’s (1991) distinctly non-semiotic ontology highlights a locus or a *center of gravity*. As a pro-optative, the concept can predict outcomes and serve engineering: in one sense, it is *not* mind dependent. In deflating the concept of mind, Dennett (1991) takes a next logical step. He invites the reader to imagine “the center of the smallest sphere that can be inscribed around all the socks I have ever lost in my life” (Dennett 1991: 28). In such a case, and in re-evoking such a case, ways with wordings affect semantic fields. Although writing LOST SOCK CENTER or CENTER OF GRAVITY is pro-optative, the results pick out, in one case, a fiction and, in the other, a scientific concept. *Thingishness* enables many ways of bringing forth unknowns that are (partly) independent of mind. Yet, there are great differences between a feel of stickiness (“*plastic*”), actual and imagined ants, desires, pro-optatives, and enduring/perduring patterns

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<sup>6</sup> After many revisions, as I read, I re-evoked what I picture as the smell of the plastic associated with stickiness: the pro-optative anchors pre-reflective experience.

defined as *centers of gravity* or by appeal to a LOST SOCK CENTER. They are “independent” of “mind” in many *different* ways.

Thingishness also subtends physical, mathematical, and logical models. Using the lexicosyntax of PLASTIC or LOST SOCK CENTER, one includes pure relations. By noting actual ants, sticky arms, and my very own “sense” of literal plasticity, I use *material* relationality (a to-and-fro that uses the non-semiotic). Humans and nonhumans unite signs with what Deely (1994) calls “other things besides.” In enlanguaged worlds, a person picking up on a sign of red shift or noticing stickiness can set off resemiotizing and, thus, trace making. Percaction can engender newness as a to-and-fro weaves languaging into the causal and the conventional. One unites:

- movements by living, perceiving bodies
- practices as performed by persons in communities (e.g. simulating/making/perceiving wordings)
- flat structures that are collectively organized in socio-cultural systems

As we percact, signs set off newness and, often, the effects of languaging in semiotic fields. Like artifacts and equipment, they can be independent of saying and thinking. The Hubble’s systems alter knowing: noting thingishness has accumulating uses based on, in part, what we call *physics*. Even a pro-optative like PLASTIC (and its cognates) is moored in practices by, say, materials scientists, or users of supermarkets. A pattern and its voicings (e.g. of [plæstik]) steer percaction across and within communities. While used in language games (Wittgenstein 1957), I stress not heterogeneity, but how noticings and wordings shape events. In part, this is because, as things in semiotic fields appear to us as signs, responding to them as events can – and often does – enmesh them with ethical concerns.

### 3.1 Enlarging anti-humanist ethics

While taking a distance from Paul Cobley’s realism, the paper celebrates what he taught me one evening in Prague. As we walked the streets, I spoke of my hopes for biosemiotics. He told me that I had things wrong: I should ask *how things appear to us as signs*. Even in pursuit of how living language, I should start with semiotics. While bewildered, even then, I “knew” he was right. In languaging, prosody is felt to mean (sic) or, as Williams (1989/1958) says, culture invites “responding to thought and feeling.” Since emplacement is a “to-and-fro,” prosody is not signaling (Cowley 1994). Oddly, even a bystander *feels* how others understand. By responding in prosodic thought and feeling, in Wheeler’s (1994)



sense, we use observership. Given detachment, repeated listening, and acoustics, an ethnographer can track extraordinary detail in events. Prosody has antecedents and consequences that weave the reportable into doing and saying. Technically, mundane actions (in enchronic scales) set off micro- and pico-scale co-modulation. With gesture, gaze, and much besides, prosody thus co-enacts thought and feeling. In one example, Cowley (2014) reports a daughter who *feels* that mother is about to “go off on a rant” and, sensing it, utters “oh good.” Given emplacement, she uses her mother’s subtle voice dynamics to urge silence. Hearing the unsaid, her mother redoubles her complaint (Cowley 2014). Expressive activity also enacts a community’s social meaning (see Eckert and Labov 2017). For example, in a case from 1990s South Africa, I trace a dominance/subordination routine (Cowley 2001, 2015) that indexes a post-apartheid setting. Specifically, two White administrators treat a senior Black teacher like a child who, inadvertently, reciprocates. All respond thought and feeling as they concert their voices. Reporting on use of the episode in a university course on crossing ethnic divides, one (presumably Black) student ties it to “problems we all face in our daily lives” (Cowley 2015). Prosodic and other expressive displays bring a social and moral dimension to events.

Focusing on how languaging is emplaced clarifies natural innovation. Thought and feeling use the sensed and the unknown as events linking understanding with a changing self that shows sensibility to the ethical and the aesthetic. As prosody begets prosody, simplex tricks trigger habits, use a detour principle, set off inhibiting, and, given wordings, permit vicariance. As bodies concert brains, eyes, and voices, people adjust to likenesses as they use things and dynamics, as signs. Positive and negative ways with wordings arise as people make/display judgements about happenings, situations, events, and, thus, each other. They use practices, certainties, and networks of beliefs as signs align with causal effects. Just as with identifying red shift, to respond in thought and feeling, is to simplexify. In complex worlds, to respond is often to put things to rights. Thus, as we orient to things as signs, how we understand draws on appearances and hidden aspects. Noticings and responding bring a moral dimension to events as we draw on pasts and the absent: seeking what may be right brings the ethical to action.

Orienting to one’s mother or rubbing the wounds of apartheid show the intrinsically ethical nature of human judging and percaction: these change how people act and inhibit as well as subsequent reports. When struck by sticky heat or Timmermans’s view of democracy, one brings bioecological awareness to living in a semiotic field. Its ethical aspect is public and, thus, affects actors and bystanders. Just as a person can *feel* how trees suffer from drought, one can *sense* a need for activism. With bioecological awareness, one sees why a limited grasp of public politics gains from, say, an ecosophy (qua post-hoc rationalization) or

seeing that ecosocial inequity is inseparable from ecological destruction. Anti-humanist ethics changes attitudes, spreads stories, and invites new ways of languaging. By starting in semiotic fields, one challenges universalism, voluntarism, and individualism. Ethics and understanding use natural innovation to shape ways with wordings that can take on collective and individual power.

### 3.2 Causal powers and science

As we perceive and construe signs, events, the unknown, and the unknowable collide. As I learned in Prague, we use things that appear as signs. Semiotics draws on this sensitivity and, thus, how ethics permeates understanding (and being seized). Philosophically, the view unites anti-Humean realism with how signs trigger what Vukov and Lassiter (2020) call causal powers: it links semiotics to radical embodiment by giving weight to emplaced events. As we act, causal powers link what appear as signs to dispositions and, for Vukov and Lassiter (2020), manifestation partners that are often non-semiotic. As with Simon's ant or Dennett's centers of gravity, what appear as signs bring living systems together with informational constraints. Yet few in cognitive science acknowledge either natural innovation or ask how we draw on things that appear as signs. Perhaps the views will come to merge. Indeed, the semiotic seems to need the non-semiotic if it is to contribute to life-sustaining relations between humans and nonhumans. In order to build ecological civilizations, we must link how things appear, ethical bias, and engineering. In seeking new harmonies, humans can seize responsibility for the future of evolution.

Distributed agency transformed human powers. Human doing, knowing, and practices use a history that led to the Hubble (and, thus, social organization). Hence, Giere's (2004) human cognitive agents build (and identify) dispositions around events in semiotic fields. For example, in seeing an image as a sign, one sees better and, in so doing, simplexifies. The ethical slant appears as daughter tries to stop her mother's rant or how White administrators act transparently with repetitive simple "language." Both the administrative procedures and the Hubble act as distributed or "flat" structures that prompt individual dispositions and participation in practices. We use what, in the epigraph, are called "movements to and fro between the mind dependent and the mind independent" (Cobley 2018: 22). Having tracked the latter to the variety of thingishness, I can both endorse and deflate the remark. While agnostic about the reality of "semiosis," I stress how things appear to us as signs. On this view, the prosodic and expressive aspects of languaging bring the ethical to the known, knowable, and, perhaps, even the unknowable. Emblematically, the mind independent thus includes actual ants

(whatever they are), feels, literal plasticity, and lost-sock centers. Indeed, its basis may lie in not semiosis, but how we bring causal powers to signs and their parts.

## 4 Semiotics, not semiosis

An expanded anti-humanist ethics brings natural inclusion, raises bioecological awareness, changes attitudes through action, and, thus, promises to change practices. It rejects universalism, individualism, and pernicious appeal to “choice.” In opening the unknown, one expels “language” from the semiotic field. The move reconnects events such that climate change and ecosocial inequity are shown to bind imperialism (and nationalism), economics-based technoscience, and the ecological price of the good life (and consumerism). In semiotic fields, we use things – and ways with wordings – to connect the lived with the unknown. No special ontology enables things to *appear as signs*. As humans, nonhumans, and thingishness entangle, noticings may be correct or, at least, productive. As pro-optatives, wordings change what we know; practically, what matters is that “all there is” includes the unperceived and the unknown or, negatively, that “everything” does *not* reduce to arrangements of qualities.

In Vukov and Lassiter’s (2020) terms, signs contribute to causal powers. Copley’s ethics uses events and things that appear as signs. These permit fabrication and re-evocation of dispositions whose manifestations (Vukov and Lassiter 2020) aid responding in thought and feeling. As humans, we sense stickiness, use pro-optatives, centers of gravity, and fictions – not to mention semiotic assemblages (Pennycook 2018). Given attitudes, ethics, and actions, a new bioecological awareness can change the adjacent possible. We can fight for what Jones and Magalhães (2020) call climate practice and social justice. Ecosophies and critical thinking can bring an anti-humanist ethics to the scrutiny of how wars, famines, and ecosystemic collapse, drawing, first, on growth-driven technoscience. Second, one can pursue how this are masked by “language” and overemphasis on what *is* known. In semiotic fields, by contrast, the known, the knowable, and the unknowable enmesh. Missing this, often the unknown (i.e. almost everything) is reduced to “risk” or “uncertainty.” Ecosystem enhancement and ecosocial equity thus need stronger science (Finke 2019) and action-oriented ethics (Cowley 2021). Stories of bioecological awareness and ecological civilizations can, at the very least, extend aspirations to enhance the quality of human and nonhuman living. Using how things appear as signs, *their* powers prompt us to shoulder *our* responsibilities. We can steer away from expert solutions – blablabla “language” – and, in outcry, demand fulfillment of our hopes.

## References

- Althusser, Louis & Etienne Balibar. 1970. *Reading capital*. Trans. Brian Brewster. London: New Left Books.
- Badiou, Alain. 2001. *Ethics: An essay on the understanding of evil*. Trans. P. Hallward. London: Verso.
- Barbieri, Marcello. 2015. Code biology. In Marcello Barbieri (ed.), *Code biology*, 171–189. London: Springer.
- Becker, Anton L. 1991. Language and languaging. *Language & Communication* 11(1–2). 33–35.
- Berthoz, Alain. 2012. *Simplexity: Simplifying principles for a complex world*. New Haven, CT: Yale University Press.
- Bourdieu, Pierre. 1991. *Language and symbolic power*. Cambridge, MA: Harvard University Press.
- Brier, Søren. 2008. *Cybersemiotics: Why information is not enough!* Toronto: University of Toronto Press.
- Bruner, Jerome. 1973. *Beyond the information given: Studies in the psychology of knowing*. New York: WW Norton.
- Chemero, Anthony. 2011. *Radical embodied cognitive science*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1965. *Aspects of a theory of syntax*. Cambridge, MA: MIT Press.
- Cobley, Paul. 2007. Semioethics, voluntarism and anti-humanism. *New Formations* 62. 44–60.
- Cobley, Paul. 2014a. What the humanities are for: A semiotic perspective. *American Journal of Semiotics* 30(3–4). 205–228.
- Cobley, Paul. 2014b. Codes and coding: Sebeok's zoosemiotics and the dismantling of the fixed-code fallacy. *Semiotica* 2014(198). 33–45.
- Cobley, Paul. 2016. *Cultural implications of biosemiotics*. London: Springer.
- Cobley, Paul. 2018. Observership, 'knowing' and semiosis. *Cybernetics and Human Knowing* 25(1). 23–47.
- Cowley, Stephen J. 1994. *The place of prosody in Italian conversations*. University of Cambridge, Unpublished PhD dissertation.
- Cowley, Stephen J. 2001. Prosody and pedagogy in a democratic South Africa. *Southern African Linguistics and Applied Language Studies* 19(3–4). 179–196.
- Cowley, Stephen J. 2014. Linguistic embodiment and verbal constraints: Human cognition and the scales of time. *Frontiers in Psychology* 5. 1085.
- Cowley, Stephen J. 2015. Verbal patterns: Taming cognitive biology. In Ekaterina Vemezova, Kalevi Kull & Stephen J. Cowley (eds.), *Biosemiotic perspectives on language and linguistics*, 123–148. Cham: Springer.
- Cowley, Stephen J. 2017. Changing the idea of language: Nigel Love's perspective. *Language Sciences* 61. 43–55.
- Cowley, Stephen J. 2019. The return of languaging. *Chinese Semiotic Studies* 15(4). 483–512.
- Cowley, Stephen J. 2021. For an actional ethics: Making better sense of science. In Stan Booth & Chris Mounsey (eds.), *Reconsidering extinction in terms of the history of global bioethics*, 205–221. London: Routledge.
- Cowley, Stephen J. & Rasmus Gahrn-Andersen. 2022. Simplexifying: Harnessing the power of enlanguaged cognition. *Chinese Semiotic Studies* 18(1). 97–119.
- Deacon, Terrence W. 1997. *The symbolic species*. New York: WW Norton & Company.
- De Beaugrande, Robert. 1999. Theory and practice in the discourse of language planning. *World Englishes* 18(2). 107–121.

- Deely, John. 1994. *The human use of signs, or elements of anthroposemiosis*. Lanham, MD: Rowman and Littlefield.
- Deely, John. 2005. *The semiotic animal: A postmodern definition of human being to supersede the modern definition as “res cogitans.”* Sofia: New Bulgarian University.
- Deely, John. 2010. *Semiotic animal: A postmodern definition of “human being” transcending patriarchy and feminism*. South Bend: St. Augustine’s Press.
- Deely, John. 2015. What semiotics is. *Language and Semiotic Studies* 1(1). 63–94.
- Dennett, Daniel C. 1991. Real patterns. *The Journal of Philosophy* 88(1). 27–51.
- Donald, Merlin. 1991. *Origins of the modern mind: Three stages in the evolution of culture and cognition*. Cambridge, MA: Harvard University Press.
- Eckert, Penelope & William Labov. 2017. Phonetics, phonology and social meaning. *Journal of Sociolinguistics* 21(4). 467–496.
- Engels, Frederick. 1946. *Ludwig Feuerbach and the end of classical German philosophy. Part IV, Marx*. Moscow: Progress Publishers.
- Finke, Peter. 2019. Linguistics at the end of the Baconian age: Or; five essentials of Ecolinguistics. *Ecolinguística: Revista Brasileira de Ecologia e Linguagem* 5(2). 5–17.
- Floridi, Luciano & Massimo Chiriatti. 2020. GPT-3: Its nature, scope, limits, and consequences. *Minds and Machines* 30(4). 681–694.
- Giere, Ronald N. 2004. The problem of agency in scientific distributed cognitive systems. *Journal of Cognition and Culture* 4(3–4). 759–774.
- Harris, Roy. 1981. *The language myth*. London: Duckworth.
- Harris, Roy. 1996. *The language connection: Philosophy and linguistics*. Bristol: Thoemmes.
- Huang, Guowen & Ruihua Zhao. 2021. Harmonious discourse analysis: Approaching peoples’ problems in a Chinese context. *Language Sciences* 85. 101365.
- Hutchins, Edwin. 2014. The cultural ecosystem of human cognition. *Philosophical Psychology* 27(1). 34–49.
- Jones, Peter E. & Maria Cecília C. Magalhães. 2020. Marx, Vygotsky and Freire: Methodological discussions on the role of language in social transformation. *DELTA: Documentação de Estudos em Lingüística Teórica e Aplicada* 36. <https://www.scielo.br/j/delta/a/WZKDMhwGqXvRKGfp4Gp8tLy/?lang=en> (accessed 30 June 2022).
- Kravchenko, Alexander V. 2011. How Humberto Maturana’s biology of cognition can revive the language sciences. *Constructivist Foundations* 6(3). 352–362.
- Kravchenko, Alexander V. 2021. Information technologies, literacy, and cognitive development: An ecolinguistic view. *Language Sciences* 84. 101368.
- Kull, Kalevi. 2009. Biosemiotics: To know, what life knows. *Cybernetics and Human Knowing* 16(3). 81.
- Love, Nigel. 2004. Cognition and the language myth. *Language Sciences* 26(6). 525–544.
- Love, Nigel. 2017. On languaging and languages. *Language Sciences* 61. 113–147.
- Malafouris, Lambros. 2019. Mind and material engagement. *Phenomenology and the Cognitive Sciences* 18(1). 1–17.
- Markoš, Anton, Filip Grygar, Lazlo Hajnal, Karel Kleisner, Zdenek Kratochvíl & Zdenek Neubauer. 2009. *Life as its own designer*. London: Springer.
- Maturana, Humberto R. 1983. What is it to see? *Archivos de Biología y Medicina Experimentales* 16(3–4). 255–269.
- Maturana, Humberto R. 1988. Reality: The search for objectivity or the quest for a compelling argument. *The Irish Journal of Psychology* 9(1). 25–82.

- Maturana, Humberto R. 2002. Autopoiesis, structural coupling and cognition: A history of these and other notions in the biology of cognition. *Cybernetics & Human Knowing* 9(3–4). 5–34.
- Mulcaster, Richard. 1582. The first part of the elementarie vvich entreateth chfeleie of the right writing of our English tung. Ann Arbor, MI; Oxford: Text creation partnership 2005-10 (EEBOTCP Phase 1). <https://quod.lib.umich.edu/e/eebo/A07881.0001.001?view=toc> (accessed 26 September 2021).
- Nöth, Winfried & Kalevi Kull. 2001. Introduction: Special issue on semiotics of nature. *Sign Systems Studies* 29(1). 9–11.
- Pan, Jiahua. 2016. *China's environmental governing and ecological civilization*. Berlin: Springer Berlin Heidelberg.
- Pea, Roy D. 1993. Practices of distributed intelligence and designs for education. In Gavriel Salomon (ed.), *Distributed cognitions: Psychological and educational considerations*, 47–87. Cambridge: Cambridge University Press.
- Peirce, Charles S. 1868. Some consequences of four incapacities. *Journal of Speculative Philosophy* 2(3). 140–157.
- Pennycook, Alistair. 2018. Linguistic landscapes and semiotic assemblages. In Martin Pütz & Neele Mundt (eds.), *Expanding the linguistic landscape*, 75–88. Clevedon, OH: Multilingual Matters.
- Petrilli, Susan & Augusto Ponzio. 2008. A tribute to Thomas Sebeok. *Biosemiotics* 2008(1). 25–39.
- Petrilli, Susan & Augusto Ponzio. 2009. Semioethics. In Paul Cobley (ed.), *The Routledge companion to semiotics*, 172–184. London: Routledge.
- Ponzio, Augusto, Susan Petrilli & John Deely. 2006. *The semiotic animal*. Ottawa: Legas.
- Raimondi, Vincenzo. 2019. The bio-logic of languaging and its epistemological background. *Language Sciences* 71. 19–26.
- Ritz, Bridget. 2022. Peircean realism: A primer. *Journal for the Theory of Social Behaviour* 22(1). 1–13.
- Ryle, Gilbert. 2009. *The concept of mind*. London: Routledge.
- Sebeok, Thomas A. 1988. In what sense is language a 'primary modeling system'? In Henri Brous & Rebecca Kaufmann (eds.), *Semiotics of culture*, 67–80. Helsinki: Arator.
- Sebeok, Thomas A. 1991. *Semiotics in the United States*. Bloomington, IN: Indiana University Press.
- Secchi, Davide & Stephen J. Cowley. 2021. Cognition in organisations: What it is and how it works. *European Management Review* 18(2). 79–92.
- Seiberth, Luz C. 2021. The transcendental role of languagings in Sellars' account of experience. *Rivista Italiana di Filosofia del Linguaggio* 15(2). 28–49.
- Sellars, Wilfred. 1960. Being and being known. *Proceedings of the American Catholic Philosophical Association* 34. 28–49.
- Shapiro, James A. 2011. *Evolution: A view from the 21st century*. London: Pearson.
- Simon, Herbert. 1981. *The sciences of the artificial*, 2nd edn. Cambridge, MA: MIT Press.
- Steffensen, Sune V. & Stephen J. Cowley. 2021. Thinking on behalf of the world: Radical embodied ecolinguistics. In Wen Xu & John Taylor (eds.), *The Routledge handbook of cognitive linguistics*, 723–736. London: Routledge.
- Stibbe, Arran. 2015. *Ecolinguistics: Language, ecology and the stories we live by*. London: Routledge.
- Stibbe, Arran. 2021. Ecolinguistics as a transdisciplinary movement and a way of life. In Allison Burkette & Tamara Warhol (eds.), *Crossing borders, making connections: Interdisciplinarity in linguistics*, 71–88. Berlin & Boston: De Gruyter Mouton.

- Swain, Merrill & Sharon Lapkin. 2011. Languaging as agent and constituent of cognitive change in an older adult: An example. *Canadian Journal of Applied Linguistics* 14(1). 104–117.
- The Guardian. 2022. Destruction of nature as threatening as climate crisis, EU deputy warns. *The Guardian*, 21 July 2022. <https://www.theguardian.com/environment/2022/jul/21/destruction-nature-as-threatening-climate-crisis-eu-deputy-warns-frans-timmerman?amp;amp> (accessed 21 July 2022).
- Vetter, Barbara. 2020. Perceiving potentiality: A metaphysics for affordances. *Topoi* 39(5). 1177–1191.
- Vukov, Joseph & Charles Lassiter. 2020. How to power encultured minds. *Synthese* 197(8). 3507–3534.
- Vygotsky, Lev S. 1978. *Mind in society: Development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wenger, Etienne. 1998. *Communities of practice: Language, learning, and meaning*. Cambridge: Cambridge University Press.
- Wheeler, John A. 1994. *At home in the universe*. Woodbury, NY: American Institute of Physics.
- Williams, Raymond. 1989 [1958]. Culture is ordinary. In Raymond Williams (ed.), *Resources of hope: Culture, democracy, socialism*, 91–100. London: Verso.
- Wilson, Robert A. 2005. *Genes and the agents of life: The individual in the fragile sciences biology*. Cambridge: Cambridge University Press.
- Wittgenstein, Ludwig W. 1957. *Philosophical investigations*, 2nd edn. Oxford: Blackwell.
- Wystrach, Antoine. 2013. We have been looking at ant intelligence the wrong way. *The Conversation*, 30 August. <https://theconversation.com/profiles/antoine-wystrach-102485> (accessed 25 July 2022).

## Bionote

### Stephen J. Cowley

University of Southern Denmark, Slagelse, Denmark  
[cowley@sdu.dk](mailto:cowley@sdu.dk)

Stephen J. Cowley (b. 1955) is Professor of Organisational Cognition at the University of Southern Denmark. His research pursues a distributed view of life, languaging and cognition, how social organizing shapes human individuation, radical ecolinguistics, and how technoscience impacts on living. His publications include the edited volumes *Distributed language* (2011) and *Cognition beyond the brain* (2017), and academic papers such as “Grounding signs of culture” (2004) and “The return of languaging” (2019).