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The Return of *Languaging*

Toward a new ecolinguistics

> "We are our languaging. We language our worlds into being.
> If we wish to change ourselves, one way may be to
> change our languaging."
>
> (Haj Ross p. 14 of "Towards a _____ Linguistics").

Abstract: Linguistics is currently being transformed. In relating this to the return of *languaging*, I link the concept's genealogy with all of its major applications. Crucially, human understanding becomes social and subjective and, thus, incompatible with linguistic theories that focus on individual knowledge of entities like *languages*, *usage,* or forms of *language use*. As in Elizabethan times, understanding is part of socially organized practice. In leaving behind linguistic "forms," languaging shapes an entangled meshwork that links living, observing, and social action. In welcoming the return of long-suppressed ideas, I focus on their implications for evolution, history, and human embodiment. In so doing, I hold that each person's practical experience links a living subject with what can be, has been, and should be said. Finally, I argue that one can use the concept of languaging to build awareness that favors collective modes of action that are directed within the living world, the bio-ecology. By tracing social organization to embodied expression, a new ecolinguistics can aim to think on behalf of the world.

Keywords: bio-ecology; distributed language; ecolinguistics; human embodiment; language use; understanding

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1 The idea of languaging

The recent return of *languaging* deflates the explanatory pretensions of linguistic objects. *Abstracta* like languages, grammar, and words are seen to hypostatize aspects of coordinated, embodied activity. In fact, human beings

happen in language:[1] bodily dynamics arise as people draw on verbal constraints in acting and perceiving. Terms like *language* and *language use* omit both embodiment and materiality and are, for this reason, devoid of explanatory power. As we all know from experience, living persons use coordinating bodies to mesh affect, action, and perception of the actual (i.e. whatever is out-there). Social subjects rely on praxis as bodies act against a domain of pattern, materiality, and institutions. *The idea of languaging* thus challenges appeal to language-systems, use, and usage. In turning to linguistic embodiment, weight falls on how people coordinate with both material and immaterial resources. The simplicity of the concept has often favored its return. For Love (2017), languaging picks out: "activities involving language: speaking, hearing (listening), writing, reading, "signing" and interpreting sign language. [...] activities that can be united by a specific superordinate verb" (Love 2017: 115). Arguably, thinking, singing, watching television, computing, dreaming, etc. also exemplify languaging. The basic intuition is that (physical) wordings are experienced aspects of meaningful activity. As assumed in Elizabethan times, there is no psychological-social divide between what people understand and what they actually do. Languaging allows persons to use the resources of a (partly) familiar world in playing roles, taking on identities, and gaining individual traits and idiosyncrasies. This happens as they pool what can be said by ways of using observations to connect changes, actions, and objects. Human coordinating depends on physical events: as people move, they say things, hear things, think things, notice things, imagine things, read things, etc. Cases like "wolf children" aside, languaging grants a place in a changing world of flux to each person, group, and organization. Languaging is thus metaphysical in that the term links acting-in-society with human understanding: it grants dialogical and social dimensions to human biology. In turning to languaging, therefore, suppressed aspects of experience re-emerge. Individual/social understanding is seen to be inseparable from a lived cultural history of using linguistic embodiment.

Languaging links bodily coordination with socially derived experience. Flexibility allows people to act in concert and, at times, alone. We draw on wordings and, of course, also talk and act "without thinking." Like materiality, linguistic form/function acts as *constraints* on embodiment. The view contests

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1 I echo Humberto Maturana, who allows that our life world is shaped by human languaging; this affects the saying, the said, and thus a subject's experience (and "observing"). For those unfamiliar with this work, a good introduction is the volume *The tree of knowledge* (Maturana and Varela 1987)

reduction of language to little things ("words") in ways consistent with what I elsewhere term Nigel Love's perspective (Cowley 2017). On his view, languaging links two *orders* of experience (see Love 1990, 2004, 2017) – it unites a play of expression with the uttering and construal of physical wordings (linguistic embodiment). Crucially, the orders are irreducible each to the other: wordings no more explain human expression than bodily coordination explains wordings. As Trybulec (2019) argues, the challenge to linguistic form radicalizes the private language argument. Like meaning, form is bound to rely on outward criteria. As intrinsic aspects of activity, wordings bind the embodied with the social/psychological. While analytically distinct, the orders are functionally symbiotic. First-order activity, moving and perceiving, emerges as persons attune to a second-order aspect of language. The play of expression sets off (roughly described) attitudes, feelings, displays of affect, etc. that trigger thoughts, feeling, changes of context, or, generally, ways of going on. Experience of acting, moving, feeling, and thinking arises as, at once, we make, hear, and imagine verbal patterns. Human acting and perceiving echo a community's history. Although first-order activity is unamenable to exact repetition, physical wordings can be mimicked and heard. Given phonetic gestures (or "sign"), they open up second order domains. Especially for literates, physical wordings evoke what, in English, are called "words": belief in these fictions has many repercussions.

The intuitive idea of languaging arose in the 16th century, if not earlier. However, critique of "code views" favors its recent return by allowing language, life, and cognition to draw on changes that escape from central control (by genes, brains, or a central executive). While Love's linguistics arose independently of Maturana's biology, the approaches resonate with each other. Thus, Love's first-order activity resembles structural coupling and the second-order uses verbal aspects of a consensual domain.[2] In juxtaposing Love and Maturana, I do not aim to parify their views: rather, I connect them with long-suppressed insights that are being widely revived. Their importance is increasingly clear because, like cognitive and social scientists, linguists increasingly ask how human activities, and intercorporeal dynamics, co-function with materiality, practices, and perceived patterns (or signs).

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2 Structural coupling arises between a living system and its medium (or environment): it draws on cells and organs while arising between organisms and the world. With "languaging", it shapes what others call practices or constraints – ways of acting to which people orient similarly, or "consensual domains" (see Maturana and Varela 1987).

Languaging ascribes understanding to lived cultural experience. It connects beliefs, rituals, technologies, institutions, practices, and much besides. Since it is multiscalar, it escapes the speaker bias stemming from Saussure's reaction against philology (Andresen 2013). Languaging happens as, often together, persons use voices in affective expression – it is more than speech or parole. Although wordings can be central, they can also be like head nodding or gesturing. Their role varies as, to name cases at random, we make a wedding speech, read an advert, imagine dinner, sing, or berate a player for missing the goal. Verbal sense shapes what Steffensen and Fill (2014) appositely call an *extended ecology* or a world of human practices and institutions that is constrained by the wider environment. The verbal permeates action-as-languaging and, importantly, languaging-as-action. Since the scope of languaging includes much of human life, the concept connects up embodied cognitive science, social theory and, importantly, a new kind of ecolinguistics. Its width arises in that, while based in human embodiment, verbal constraints enable people to act in ways that can be resemiotized (Idema 2003). Many humans use literacies that, in history, shape language systems, views of use/usage, and vast domains of institutionalized practice. Written products aid reflection and change views of languages and grammar (Juffermans 2015). As a social transformer, languaging uses verbal constraints in ways that have ethical, social, and educational importance. If we are to take responsibility for the future of evolution, we must change collective decision making. On the one hand, we need a concept to encompass all domains of the living – what Cowley (2014) suggests be called the bio-ecology. On the other, we need a concept of languaging that allows us to re-evaluate what is, and should be, said and, above all, what can be done.

2 Towards a new ecolinguistics

Ecolinguistics covers work focused on critique of environmental discourse (Fill 2018), the making of positive narratives (Stibbe 2015) and, at once, sociolinguistic issues of language contact and, above all, the future of non-hegemonic languages (see Haugen 2001; Steffensen and Fill 2014). By using ecolinguistics as an umbrella term, many link concerns about the living world with social issues bearing on language. However, most see the link as metaphorical (Garner 2004; Eliasson 2013). Although not my main concern, it is striking that, in starting with languaging, the connection becomes entirely real. Quite simply, the concerted workings of embodiment connect language and

living beings: accordingly, the concept points to a radical or new ecolinguistics. A turn to languaging enables one to ask how living world is affected by socio-cultural activity and, thus, to open up new questions about the future of human living that are inseparable from languaging.

Just as semiotics encompasses linguistics, languaging transcends semiosis. It makes it possible to ask how experience of coordinated movements influences a subject's experience of a specific bio-ecology (see Cowley 2014a). While all animals depend on embodiment, *human* subjects also *say* things about what is perceived out-there. Each child individuates by using languaging, local praxis, and materiality. Given the role of languging in constructing personhood, those who study its effects can contribute much to practical issues and related psychosocial concerns. Thus, just as Li (2017) shows that translanguaging is important to education and for lived identity, the study of languaging can also be used to raise many kinds of awareness. Once one penetrates the sayable, personhood can be traced to how the extended ecology impacts on the living world. By disclosing the transformatory effects of human living– we begin to rethink our place in evolution. Our lineage of hominids is, like any other, part of the bio-ecology. Only ways of linking embodiment with verbal patterns are central to culture and, just as crucially, its unintended effects. The results ensure that we say things, think, and act out what becomes history. Humans – and we alone – can "think" on behalf of the world: given that responsibility can shape action, we shape the future of evolution.[3]

3 From form to pattern-in-motion

There is a general move away from tracing language to determinate "signs." As with artificial codes (and writing systems), however, many ascribe linguistic functions to relatively invariant forms or functional entities. The view dominates the social sciences, psychology, cognitive science, and much of neuroscience. As every linguist knows, its roots lie in how Saussure broke with philology to propose a linguistic object (langue). For over 100 years, language was ascribed to "systems" whose forms (or signs) were taken to consist, roughly speaking, in counterparts to written "words." For Saussure, this is possible

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3 The point is arguable but important. A referee points out that transhumanists accept human responsibility for the future of evolution but argue that we may transcend the living. This is a matter for future discussion.

because "speech" (parole) draws on a hypothetical language faculty.[4] Even today many trace language to utterance acts and/or intentions that depend on a person (or a part of a person). By idealizing a "system" that is used, linguists aim to escape from the shackles of the subjective. However, by so doing, they lose sight of both intuitive understanding and what is gained from close investigation of social behavior. In reaction, the twentieth century saw a gradual move against "context-free" views of language. Today, even those taking form-based views allow discourse, use/usage, affect, and, perhaps, multimodality to influence meaning (e.g. Carston 2010). Yet, in steering clear of the subjective and the biological, linguistic form tends to remain paramount.

In turning to languaging, the focus falls on activity by living beings. In giving weight to movement and cognitive dynamics (as well as verbal pattern), one turns to what most have always regarded as extra-linguistic. Linguistically informed perception can affect human doings, sayings, and feelings (just as these affect the saying and the said). Historically this was marginalized and split between the social and the psychological. Where studied, the focus fell on Peirce's "semeiosis," phenomenology, or, recently, descriptions of non-verbal behavior, context, interaction, and intercorporeality. A return to languaging, by contrast, reunites bio-functionality with lived experience. Linking lived and linguistic meaning, organism–environment relations can underpin semiosis, phenomenology, and intercorporeal activity. Human powers self-fabricate while drawing on actions that evoke verbal echoes (Love's two orders). The idea is not new. In semiotic tradition, this is traced to modeling systems that shape species-specific worlds: human models, it is claimed, are also symbolic (e.g. Deacon 1997; Cobley 2016). Others take more radical views. Languaging can be traced to proto-conversations (Bateson 1975) where babies and caregivers are moved by each other's movements as the infant forms intrinsic motives (Trevarthen and Aitken 2001) that shape subsequent behavior. Since phonetic gesture (i.e. verbal pattern) is intrinsic to the caregiver's whole-body activity, babies can draw on the normative force of coordination. Unbeknown to them, they use *languaging* in its verbal aspect. As a result, as Halliday (1975) shows, babies learn how to mean by using *wide* interactivity (see Gahrn-Andersen 2019) to navigate a world that gradually becomes *familiar*.

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4 Work founded on appeal to body-world interaction constitutes *radical embodied cognitive science* (see Chemero 2011). Broadly, this includes biosemiotics (see Favareau 2009), code biology (see Barbieri 2015), and, generally, anti-representationalist views of cognition (see Hutto and Myin 2012). The latter link pragmatism with phenomenological tradition and, beyond that, to figures like Järvilehto (1988), Varela et al. (1991), Gibson (2014), Maturana (see 1970, 1978, 1988) and work in the enactivist paradigm (see Stewart et al. 2010).

Although many animals have rich expression (see Darwin 1872), the use of wordings (a second-order) is distinctly human. Appeal to languaging thus has evolutionary implications. It allows culture, voices, and social life to derive from what von Humboldt (1999) calls *energeia*.[5] Since humans are primates, they link the cognitive dynamics of living beings sustain with norm-based and tool-using aspects of culture. Unsurprisingly, these appear in many species and, when personhood is defined as intelligent use of social norms, it seems likely that other species use conventionalized signals (see Ross 2019). *Homo erectus* used tools, organized hunting, and managed waves of emigration that presumably made mimetic use of social organization (Donald 2007). Not only did collective life prefigure language by hundreds of thousands, perhaps millions, of years but it changed the evolution of human ontogenesis. Neoteny transformed the species in that, above all, it allowed understanding to be partly grounded in interaction with caregivers. Its mimetic basis (Donald 1991; Trevarthen 1979; Cowley 2012) grants modes of action that, plainly, use general intelligence (Kuhle 2019). Indeed, even second-language learning is partly mimetic. Thus, adults use more than what can, and cannot, be said – they link vocalizing, listening, interacting, multi-modality to manage action, and identity. Persons sensitize to voices, expression, and pursue communicative projects that change what they believe, how they regard others, and how they feel. Material relations affect experience, choice of task-types, use of wordings, and ways of enacting social order (see also Malafouris 2013). As Swain (2006) shows, "meaning-making" reduces to neither "intention" nor form-and-function. What she once called *language use* (Swain 1985) drives innovative ways of making and interpreting texts or electronic media. For her, *languaging* is thus more than communication in that it links action with intent without regard to the sayable. The concept offers much to both study of development and, indeed, grasping human change over the lifespan.

Becker (1988, 1991) used anthropology to bring languaging to general linguistics. Building on Asian experience, he showed how form-based models overlook particularity. Challenging Language (with a capital "L"), he stresses that we know only "activity by human beings": languaging uses how individuals differ, settings differ, times differ as, indeed, do the specifics of speech or writing. To engage with each other, people use subjectivity to override differences. In that expression is always particular, talking to each other, the

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5 Von Humboldt's (1999) *energeia* is central to Russian tradition. As explained below, Raimondi (2014) finds a "bio-logic" in the Maturanian view that "languaging" is an evolving social process.

use of literary genres, and social performance are inescapably evaluative. The results bind experience into routines, action, and perception. The insight resonated far and wide: particularity influenced, for example, Haj Ross, Paul Friedrich, Christopher Pyle, Deborah Tannen, and Barbara Johnstone. Ways of languaging were used to open up how talk is engendered, the poetic, linguistic individuality, and the language of dreams (see Friedrich 1986). While of instrumental/communicative value, the evaluative aspect of languaging is able to permeate culture through the use of artifacts, their role in practices, and, of course, control by institutions. Building on Maturana and Varela's (1987) *Tree of knowledge,* Becker linked languaging to social practices, or how linguistic recursivity can sustain a world where culture unfolds in historical scales. This connects a Heideggerian picture to what Raimondi (2014) appositely calls Maturana's *bio-logic*. Not only do people use activity (and cultural resources) to observe as they act but, as people observe, they find themselves moved to act (or not to act). While Heidegger might be uncomfortable with the parallel with biology, he too traces language to communities where, as he says, *Die Sprache spricht* (Heidegger 1971). As people coordinate, they respond to linguistic resonances: the past speaks through us. Even infants use sociocultural praxis in coordination: without this, they could never anticipate what people *say*. Languaging connects subjectivity with past experience, wisdom, and follies as the said both enhances observing and also invites ways of acting/understanding.

Two lines of critique underpin the theoretical development of *languaging*. First, Linell (2004) finds 101 kinds of written language bias in linguistics or, in Andresen's terms (2013), its history can be traced to on how philology generated speaker bias.[6] Second, Roy Harris (1981) identified a "language myth" or how folk views of thought transfer or telementation sustained appeal to fixed codes. As noted, Nigel Love rethought this by viewing languaging as uniting two orders. Below, I turn to how Alexander Kravchenko (2007) used Maturana's work to stress how, as people coordinate, they use connotations, experiential response, and, thus, evaluation. Once again, languaging is particular and subjective or, in other terms, *more* than communication. To this, recursivity adds slow-scale stability to languages and cultures that co-evolve with human ways of life. Like cognition and life, languaging uses the multiple hubs that we call persons. It is distributed (see Cowley 2011) or, in Maturana's terms, "third-order" living systems are able to regulate how humans manage face to face and

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6 The first edition of *Written language bias* appeared in 1982.

solo activity.[7] Accordingly, Kravchenko merges perceived structures with a person's orienting to the orientations of others. They draw, in part, on bodily dynamics and, in part, how people use a language stance (Cowley 2011) to hear physical wordings as verbal patterns. The ability grounds the folk view that "words" link the world's appearances to the said. Languaging is thus integral to action, reflection and, beyond this, understanding and the re-voicing of "thoughts." Children gain linguistic and metalinguistic ways of acting that localize practices such as questioning, clarifying, studying grammar, or, indeed, learning to write computer programs. Symbiosis of the two orders connects linguistic embodiment with all that is associated with perceived verbal patterns.

As a biologist, Maturana pursued how linguistic pattern affects human knowing. Ignoring embodiment, he stresses that coordinating with others (within a community's consensual domains) enables persons to become *observers*. Others stress that languaging is primarily action (and that action draws on languaging). As in Swain's work, this enables advanced learning and, as in Becker's, particularly is crucial. Finally, Kravchenko connects it to the distributed perspective. Indeed, the currents only truly converged with Garcia and Li's (2014) work on translanguaging. The broad picture has advantages in that, above all, appeal to *languaging* posits no a priori object, theory, or specific tradition. Like semiosis, it links the social/psychological to embodied linguistic experience. Accordingly, as code views blend into the history of structural linguistics, *languaging* has returned to the foreground. Before pursuing detail, I sketch the term's extending reach in Figure 1:[8]

The recent return of languaging builds on critique of code views. Historically, it challenges appeal to the self-contained objects of linguistics, psychology, physiology, sociology, etc. In linguistics, appeal was made to self-contained systems (viz. langue and parole) and, in philosophy, Frege limited meaning to propositional content. Later, brains and/or other means of control (e.g. convention) were taken to determine how speaker-hearers make/construe utterance-acts. Whilst linguists focused on systems, others focused on norms, minds/brains, or, in practical work the "use" of utterances, texts, and discourse. For reasons that need not detain us, this resonated with 20th century Anglo-American individualism. In micro domains, the focus fell on how people learn,

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7 For discussion, see Mancilla (2011). In Kravchenko's terms, "as third order living systems, social systems are not just biological; as units of interactions with the environment operating in the relational domain of interactions, they establish an ecological niche which cannot be characterized in terms of physical space" (Kravchenko 2016: 109).

8 It is difficult to choose between sources: accordingly, I selected book-length volumes and papers where the use of the term is reviewed. I apologise to those whose work I have missed.

acquire, or construct language-systems by using habits or mind/brains to manage "production" and "processing." By contrast, in larger domains, focus fell on context. In and around ethnomethodology, for example, social actors were said to use a turn-taking mechanism that served to "recognize" types of action. In wider communication, context was part of a macro-social sphere that allowed for many kinds of social practices. Together, macro and micro were defined as centered on individuals: as a result, conversations or discourse were construed as *language* or the disembodied *use* of a language-system.
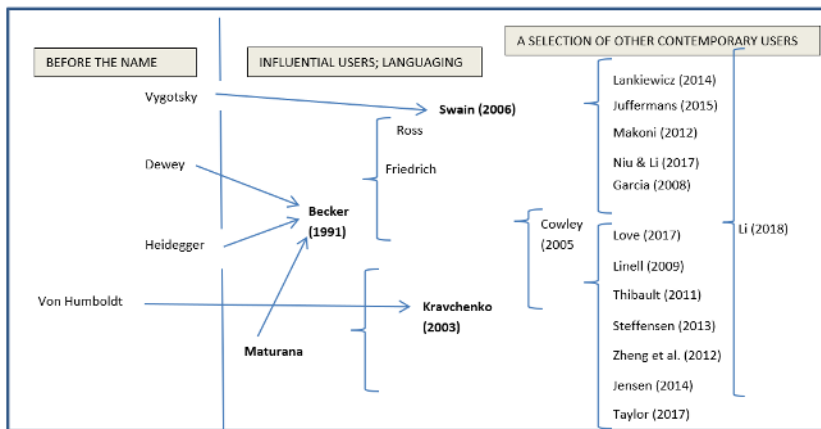

Figure 1: A summary of how *languaging* returned

Languaging rejects individualism. It highlights communities, personhood, and stresses the socially derived nature of subjectivity. An individual history enables a person to draw on community life in becoming an observer-actor.[9] Since personhood is neither socially nor genetically determined, even appeal to assimilation-and-accommodation is bound to be partial. Such models leave out praxis, communities, and how persons individuate as a result of languaging. In highlighting what some call *genres*, as in Wittgenstein's work, one finds no psychological/social opposition. First-order activity or embodiment enables people to gain from immersion in languaging. Eventually, human subjects enter a world of observing/acting (see Gahrn-Andersen 2019) as they connect up bodily activity, languaging, the nonliving, and, of course, a changing grasp of social and cultural praxis. As mature adults, each person inhabits an extended,

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9 A referee asks if these roles are on a par. It is a good question and, quite possibly, answers vary across the lifespan, societies, and activity types. Perhaps we should rather talk of *languagers*.

historical world. Thus, as von Humboldt saw, communities depend on linking nature, culture, and a global language process. By stressing cognitive dynamics, Kravchenko adds another crucial ingredient. Given culture (or slow-changing consensual domains), each party uses embodiment to attune observing-and-acting. The materiality of languaging transforms one's grasp of the out-there – in time, one develops new skills and roles. As for Linell (2009) and others, human dialogicality links practice with thinking. In every act of utterance, initiative links with response in ways that can be, at once, directed, and non-linear. Though based in materiality, languaging sets off effects that are always amenable to description as being iconic, indexical and symbolic.

4 Languaging: A brief genealogy

Today *languaging* unites Love's two orders, Maturana's bio-logic, Becker's focus on lived particulars, and Swain's emphasis on going beyond the currently sayable. Below, such views are traced to older ways of describing how understanding emerges with action. Just as mathematical concepts force themselves on us (Wittgenstein 1958: 204e), so do lines of thought. This is because understanding is not an inner process, but a socially derived consequence of coming to make, stabilize, and revise judgements based on acting while drawing on outer criteria. Just as seeing images prompts us to make sense (or not), hearing, speaking and reading come to embody understanding (or not).[10] *Contra* Peirce and Saussure, linguistic substance influences human feeling, acting, and perceiving. Given the materiality of these relational dynamics, languaging and human interactivity (Steffensen 2013; Trasmundi 2019; Gahrn-Andersen 2019) are inextricable from human perceiving, acting, and observing. Unsurprisingly, therefore, linguistic investigations increasingly turn to action and networked connotations that serve to sustain human languaging.

Languaging is part of learning. In the earliest usage I have found, Mulcaster (1582) notes how it holds back the genius of English grammar school boys. In spite of their "sharp wits," languaging both drives understanding and, at once, prevents them from reaching the "pitch" of classical thought (cited in Nelsen

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10 For Maturana, all of these processes are described as "structural coupling"; in the work of enactivists, they are related to different kinds of "autonomy" (e.g. Di Paolo et al. 2018). However, in appeal to languaging, one avoids any kind of theorization: empirical work is needed to pursue the integration of multiscalar temporalities.

1952).[11] Strikingly, entries in the Oxford English Dictionary give the term negative connotations that largely parallel those of the form *tunging*.[12] Even in the middle of the 20th century, languaging tended to be used to evoke peripheral activity. In academic work, it was often contrasted with refined speaking or writing. For example, Bross and Bowdery (1939) treat it as a "general process of discourse" that resembles chiseling. While highly variable, it contrasts with clear discourse (where people know what to say): hence, just as a chisel shapes wood, languaging drives "logical reorganization of its subject-matter." Its peripheral status also appears in opposing adult language to the languaging of children, positing that its role falls mainly to interpersonal meaning (Halliday 1985) or Joseph's (2002) misattribution of its prominence to the work of Whorf. Although never using the verbal form, Joseph correctly notes that Whorf focused on "languageable" thoughts. Strikingly, while rarely (if ever) cited, each case resonates with current usage. As Heidegger, Whorf, and Halliday all realized, languages speak through us. For the same reason, Morse-like rule-following is no basis for what comes to be said. Yet, a turn to languaging also rules out linguistic determinism: human understanding is redolent with personal resonances. This is why, in pursuing how persons-in-communities language, we must reject not only a language faculty, but also appeal to mechanistic models of speech and language production or realization.

Love's work permits body/verbal symbiosis, Maturana's highlights the connotative, Becker's the particular and Swain's advanced learning. By contrast, form-based models are bound to emphasize denotation and, in pursuing grammar and lexis, they unintentionally echo the speaker bias of philology

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11 "When England produces enough sharp wits, therefore, the English language will no doubt reach the pitch of the classical tongues or go even higher. Once that goal has been achieved, the grammar school student will reap inestimable benefits: And doth not our *languaging* hold vs [b]alk four years, & that full, think you? If it hindered vs no more, tho it help vs verie much, the losse were the lesse. For the time it is most certain, that we ar hindered by tungs, tho we must harken vnto them, till we haue help at home. And that our best vnderstanding is in our naturall tung, who can deny" (The First Part of the Elementarie [1582: 258], cited in Nelsen [1952: 119–143]).

12 Under *languaging* the OED lists early uses as: "1702 T. Tryon *Way to get Wealth* 66 Was the Stile and Manner of Languaging the work of the Prophets or no? 1875 J. R. Lowell in North American Review 120: 395 It is very likely that Daniel had only the thinking and languaging parts of a poet's outfit. 1901 W. D. Howells Heroines of Fiction 1 109. The loose, inaccurate and ineffectual languaging of this scene. Under, tonging, we find: 1584 R. Scot Discouerie Witchcraft xii. xviii. 268 Trusting rather to the tonging of their belles, than to their owne crie vnto God. 1895 H. Callan From Clyde to Jordan 136 You must give them a right good 'tonguing'."

(Andresen 2013). As a result, like tacit understanding, languaging was often treated as marginal. In Emig's (1977) *Writing as a mode of learning*, "verbal languaging processes" and other "forms of composing" are contrasted with the precision of writing. In Lado's (1979) work, *languaging* is not coordination, but performance that aids in learning to make use of the verbal. Indeed, such traditions came to be known as code-views, as showing *written language bias* or theories that reduce language to form-based systems (and functions). Conversely, in starting with how people act, feel, and talk, the concept of languaging re-releases its potential. Long before Maturana used the term, Debes (1981) proclaimed his wish that *languaging* be used to build a new linguistic paradigm. Soon afterwards, Colmar (1986) offered a *Model of languaging* as the basis for desired educational change. In the 1990s, Haj Ross and colleagues held conferences on languaging and, at that time, a *Journal of Visual and Verbal Languaging* appeared very briefly. By 2000, the scope was clear: languaging (a) extends folk views of language; (b) stresses the subjective and the particular; (c) applies to oral and literacy-based practices; and (d) derives from linguistic embodiment. Since then, many moves have led to further consolidation. Above all, it became clear that languaging encompasses biological, cognitive, and cultural aspects of embodied and social activities that influence human life.

Languaging connects the poetic with anthropological, social, biological, and pragmatic concerns. In his classic essay, Becker (1991) proclaims: "there is no such thing as Language, only continual languaging, an activity of human beings in the world" (1991: 34). Linguistic reifications – models of language systems and their parts – omit lived experience. Becker links applied and sociolinguistic concerns to, not descriptions of standard languages, but the diversity and superdiversity of the non-modern. Everywhere, languaging transcends the said as its perceived results set off effects (and expectations). Friedrich's (1986) *Language parallax* pursues its centrifugal and centripetal forces into poetry and the imagination. In appealing to orthogonal forces, as for Bakhtin, creativity is traced to how verbal pattern can be re-evoked by linguistic embodiment (first-order language). As people engage, discrepancies prompt others to find ways of *going on*. Related ideas appear in sociolinguistics too. Increasingly, linguistic codes are traced not to literacies, but to colonialism and nationalism (see Makoni and Pennycook 2012). Appeal to code can be taken to mask a social semiotic process (Makoni 2013) that enacts various kinds of political, economic and historical hegemony.[13]

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13 Among others, he cites Garcia, (2009), Creese and Blackledge (2010), Møller and Jørgensen (2012), Jacquemet (2005).

Juffermans (2015) pursues the richness of languaging into the intertwining of the written and the spoken. He asks, "who languages to whom, when and where, with what resources and under what conditions" (Juffermans 2015: 15). In The Gambia, the diversity and the un-evenness of literacy ensure that each person's powers tend to attest to an individual history of languaging.[14] This radical sociolinguistics is a "crossing" (Rampton 2017), a view where literacy-in-action shapes personal identity. Juffermans thus stresses the need to *conceive* of systems, parts, values, and their uses. Constructs based on language products alter observing, activity, and human thinking. He endorses Mingolo's (1996) dictum that, "languages are conceived and languaging is practiced" (1996: 881). Human activity draws on constraints based in what is familiar to communities. People rely, in part, on social realities (or consensual domains) as languages speak through them. In connecting languaging with pattern and social and bodily activity, these views too resonate with Maturana's bio-logic and Love's orders of language.

Swain plays down *de facto* language to focus on "a never-ending process of using language to make meaning" (Swain 2006: 96). Though early work invoked "language use," she later developed her own view of languaging. As she did so, she focused, above all, on talking and saying things aloud. Rather than invoke a social subject, she echoes Vygotsky's (1978) inter-mental and thus leaves aside first-order activity to offer a more general view. Advanced learners self-instruct by using what Dewey (1896) might call reflex arcs within reflex arcs or Vygotsky self-directed response. As a mediating means, languaging links learners, teachers, and peers with artifacts and skills in self-fabrication. Self-control and autonomous use of tools like textbooks and writing implements (Lantolf 2011; Vygotsky 1978) drive self-instruction. For Swain and Lapkin (2011), languaging is an agent, regulator, and mediator of learning that serves to manage attention, recall, and knowledge. Language acquisition is thus "the process of making meaning and shaping knowledge and experience through language" (Swain 2006: 98). In advanced contexts, languaging is "part of what constitutes learning" (Swain 2006: 98). She stresses patterns that, in principle, can be visible/audible. For Makoni (2014: 80), the "totalistic interpretation of languaging" offered by Swain and others underspecifies how "making-meaning" clarifies learning. While languaging may indeed lack explanatory power, *contra* Makoni, one can argue that such weaknesses can be avoided by allowing for recursivity. In pursuing a related view, Lankiewicz (2015) connects

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14 There is a neat parallel in the official name of the country it is "The Gambia" (with a capital T on the determiner).

the ideas to cognitive linguistics; however, rather than emphasize embodiment, he links applied concerns to how mental models contribute to languaging. Whatever one thinks of these diverse views, there is no doubt that looking beyond linguistic form is a valuable research strategy.

Although it may be intuitive that languaging leads to learning, many find it odd that it can transform the experience of living. This is because, in spite of Wittgenstein's work, many still posit a mental or neural aggregate of linguistic forms. Indeed, refocusing on active perceiving and imagining is central to Trybulec's (2019) important paper. In radicalizing the private language argument, he stresses that, like agreement about meanings, agreement in form demands outward criteria. This too fits Maturana's bio-logic: species inhabit their own worlds and humans draw on social praxis – we believe in ancestors, money, social networks, and words.[15] Experience unites the social and the subjective – languaging connects connotations and ways of life. The bio-logic applies generally. In illustration, consider how frogs identify *what humans call* "flies." The case is classic in that the young Maturana co-authored, "What the frog's eye can tell the frog's brain" (see Lettvin et al. 1959). Later he concluded that frogs do *not*, in any literal way, categorize flies. Rather, historically located scientific practice licenses *saying* that frogs are able to categorize. In Maturana's later terms, this was, not an objective finding, but an observation made possible by a consensual domain. The authors thus adopt something like what Dennett (1989) calls an *intentional stance* by attributing a capacity to the frog. Indeed, it is likely that tracing his own remarks to a history of languaging came to play a foundational role in the later bio-logic. It prompted Maturana to trace the capacity of observing to circular processes that originated with the functionality of living cells. Not only do they self-sustain through *structural coupling* but, crucially, they cope with detected perturbances. In frogs, lived perturbances enable them to coordinate with what eyes detect. While catching what observers call "flies" (or the experimenter's "pellets") they gain impressive powers without categorizing anything *as* flies. They use the materiality of relational dynamics in eye-guided tongue flicking. Unlike human observers, frogs do not language.

Since bio-logic limits the complexity of perceived worlds, much the same may apply to languaging. Whereas frogs use tongues to catch flies, human

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15 This insight is usually ascribed to von Uexküll (1957) who is central to both biosemiotics and enactivist work. It also inspires Berthoz (2012) who appeals to not sensory worlds, but a process of perçaction (see Gahrn-Andersen and Cowley 2018). The view also fits with most varieties of radical constructivism.

"tunging" attunes us to many kinds of things (including other observers, events, and situations). A domain of reasons emerges as living subjects learn by orienting to locally valued public criteria. Similar views often use the empirical work of Colwyn Trevarthen (1979) and those who build on his findings. While newborns experience, say, pain or the taste of milk, they soon orient to objects while using social criteria: they gain *de facto* expectations within a world of languaging and, by three months of age, show incipient signs of culture (see Cowley et al. 2004). Later, languaging extends experience as they begin to sense differences and gaps (see Gahrn-Andersen and Cowley 2017). In infants, this can ground willful action and, indeed, making "use" of language in a verbal aspect. Eventually, of course, humans come to see flies as flies (or hover-flies), hear physical wordings as verbal and, if literate, talk about fictions such as languages, words and literal meanings. Human subjects gain routine ways of using what is *absent* (van Heusden 2009; Deacon 2013). As a result, we draw on non-local criteria (e.g. plausibility, appropriacy) to re-evoke aspects of the past, and imagine the possible.[16]

The turn to languaging invites an analogy. Just as frogs learn by catching and eating flies, languaging may prompt humans to self-fabricate as languagers. In Love's terms, experience of the first-order may drive us to become "knowers" of second-order patterns. Given relational materiality, individual history in a community can reveal that certain things tend to be said in certain ways. Languaging transforms ontogenesis: by eighteen months, children use a language stance to hear pattern and, then, to control phonetic gestures. While still using motivated coordination, they also use forms of mediation to pretend and name objects. Later, they may even ask how frogs (metaphorically) recognize flies. In Friedrich's (1986) terms, talk is both chaotic and patterned – observing imposes coherence on each languager. Linguistic recursivity grants sensitivity to reiterated ways of using both phonetic gestures and ways of controlling pitch, pace, and loudness: a baby latches onto ways of acting and speaking. The infant is perceived to be orienting to her caregiver (or not) and, as she does so, she gains rewards based in local values (as she comes to hear second-order constructs that van den Herik (2018) calls "repeatables"). As parties meet and fail to meet expectations, the baby comes to perceive objects as *things,* and humans as *persons.* Given phenomenology, coordinated

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16 As a referee points out, this is also found on a form-based view of language. For example, Lupyan (2012) shows how labeling exerts extremely rapid and pervasive effects on putatively non-verbal processes such as categorization, visual discrimination, and even detecting a stimulus.

coordinations, and also ways of engaging with these, they orient to what others call events and situations. A child learns to conceive of *sames* (see Gahrn-Andersen 2017) and, later, to use these in attending to physical wordings. In time, a caregiver becomes "mama," a bottle "milk." and, perhaps, certain flying things become "flies." As an observer within praxis, a child uses the consensual domain to construct a connotative world that shapes observing and action. She learns ways of acting that meet or violate social expectations: she uses a third-order of social regularity (how coordinated coordinations are coordinated by populations) or, loosely, how culture constrains the use of languages.

As cognitive science merges with the life sciences, Maturana's influence is growing.[17] Yet, while the bio-logic arose in the 1970s, his daunting style led to his work being filtered by his student, Francisco Varela.[18] Only in the new millennium did Alexander Kravchenko show the value of tracing language to a "cognitive domain of orientational interactions" (Kravchenko 2007: 531). As part of behavior (or cognitive dynamics), languaging experience changes both self and others. Given its transforming power, it cannot use a language faculty but must draw on situated languaging (see also Andresen 2013). As people say things, they link experience to praxis and, at once, orient to expectations. The results affect observing, selves, and coordinated activity. Kravchenko (2008) cites Zvegintsev (1996: 50),

> "language is an activity that involves all the functions which make humans human. And language is an activity that generates the means for its realization in concord with the diverse functions possessed by language. [...] To limit the study of language to the study of its use as a means of communication and thought is to deliberately narrow the scope of one's research and forsake cognizance of the true nature of language in its entirety." (cited Kravchenko 2008: 35.)

As in Wittgenstein's later work, *activity* evokes a human form of life (as opposed to a language game). Kravchenko thus treats linguistic relations as linking materiality to lived experience and the slow dynamics of "language in its

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17 Kravchenko sketches Maturana's view: "Natural human language is species-specific adaptive recursive behavior (languaging) in a consensual domain of interlocked conducts involving patterned vocalizations, heterogeneous artifacts and practices" (2016: 108). While bringing home its multiscalar nature, it offers little practical or empirical value.
18 Varela and colleagues stand behind the enactivist "paradigm" (see Varela et al. 1991; Thompson 2010; Stewart et al. 2010). Like Maturana, enactivists trace cognitive processes to how life brings forth meaning; this is traced to the "sense-making" of species as diverse as humans, frogs, and Escherichia coli. Leaving aside languaging and the observer, while some invoke *participatory sense-making* or sensorimotor activity, others place a "gap" between human and "'basic" kinds of mind (Hutto & Myin 2012).

entirety." Like Morris, he challenges, "the false assumption that, epistemologically, linguistic and nonlinguistic entities possess different ontologies" (Kravchenko 2003: 179). Material relationality thus replaces abstractions like semiosis, disembodied content, or coding. For Kravchenko, iconic/indexical activity is often inseparable from its so-called symbolic aspect. Rather, coordination tends to invite semiotic description. Thus, "cognition is not a means to acquire knowledge of an objective reality but serves an active organism in its adaptation to its experiential world" (Kravchenko 2003: 180). Cognitive dynamics — not words, reference or denotation — drive languaging. Echoing Maturana, Kravchenko (2008) writes:

> Language must arise as a result of something else that does not require denotation for its establishment, but that gives rise to language with all its implications as a trivial necessary result. This fundamental process is ontogenetic structural coupling which results in the establishment of a consensual domain. [...] Linguistic behavior is behavior in a consensual domain. (Kravchenko 2008: 66).

As interpretation, the dynamics of language behavior are semiotic and material. Accordingly, "[W]hat we have become so much used to calling linguistic signs, opposing them to non-linguistic signs, for an observer are just another variety of constituents of the immediate environment (environmental niche)" (Kravchenko 2008: 32). Given relational materiality, one can reject both the "reality" of language-systems and disembodied "use." It is therefore a mistake to reduce language to communication. The tendency arises because, while communication serves linguistic behavior, an observer's powers open up many ways of acting in the world. Languaging functions, above all, to direct orientational modification while also bringing about actual effects: it is used in action and is finely adapted to a culturally specific body and brain.

Kravchenko looks beyond words, sentences, and written discourse. In linking direct experience with interpretation, semiotics becomes *post hoc*. For Kravchenko, "signs constituting natural language are nothing but empirical objects included into an organism's interactional domain" (2008: 33). Even things – mothers, milk, and flies – arise in determining an "ostensive entity" or non-linguistic object. A perceived entity arises in a semiotic relationship with a linguistic (non-ostensive) one through what Kravchenko (2008) calls "the semiotic multiplication of the world" (2008: 34). Hence: "the function of language as a sign system is to accumulate and store humans' categorized experience (knowledge) of the world" (Kravchenko 2002: 2). Semiosis uses bodily experience to enact "an organism's interactions with the environment."

Challenging the stasis of synchronic models, Kravchenko stresses that languaging is flux and, for this reason, analysis can itself contribute to observing. Rejecting language use, like von Humboldt (1999), he sees languaging as product and process. It is lived embodiment that unites experience with both material and relational dynamics.

5 Animating the observing subject

Having introduced languaging around contemporary work, its genealogy and more specific claims, I now emphasize the observer *qua* living (dialogical) subject. In the course of languaging, personhood draws on practical knowing, imagining and ways of re-evoking or imagining experience. Each of us manages multiscalar complexity by connecting with things/people, setting off connotations, and, thus, evoking actions, verbal patterns and ways of embodying experience:

– Languaging pushes understanding beyond the words actually spoken or written. It enacts direct or embodied coordination that, in literates, trigger skills in linking documents to ways of perceiving that use verbal pattern.

– While not organism (or mind) centered, languaging always has a particular sense – it links the feeling (and the proto-phenomenological) to experience. Knowledge accumulates as people use languaging in developing skills over the lifetime.[19]

– Languaging (and languages) speak through us: we understand more than we can know or say – and know much more than can ever be said.

– Though based in bodily coupling, languaging is irreducible to neurophysiology. It uses a history of cognition or of how life informs the domains of praxis within which a person draws on languaging to find her way in the world.

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19 Much depends on pico-dynamics (around 50–300 msec.) that mesh (nanoscale) gestural and articulatory moves with changing pitch, pace, and loudness. While prosody is central, this also appears as visible coordination within and between bodies. Insofar as pico-events influence experience, they are proto-phenomenological – while too transient to be reported, they influence what is heard, perceived, and done.

Languaging unites phenomena with different histories. However, given a history of marginalization, the term still strikes many as unseemly. Further, its heterogeneity makes it too broad to challenge the view that knowing depends on linguistic objects. Accordingly, I stress that the said grants nonce events a particular sense that is effectively evaluated by going on or, alternatively, by falling silent. In the first place, languaging has a constitutive role in meaning and context. Second, where one takes a language stance or attends to verbal aspects of an utterance act, written text, or thought, semiotic description is easy. It draws on a fusing of material relationality with how one *actually* perceives linguistic pattern (i.e. at a given moment). At times, one draws on what is meant, at times on the said, at times on attitudes and, at times on views of the persons concerned. By varying ways of attending, humans range in time (Cowley and Steffensen 2015); not only does a past pervade languaging but, as it does so, each person gains skills with using cultural and personal resources whose power was forged at other times.

In folk views, cognitive dynamics are extra-linguistic. In ignoring linguistic embodiment (i.e. what Saussure called *substance*) language becomes a verbal shadow that can be manipulated by using a language stance. Often, the focus is placed on a *perceived* reality of linguistic forms. However, when traced to a history of coordinating coordinations, these must be reconceived as second-order fictions (i.e. verbal patterns evoked by physical wordings). Like money or weather, only their predictive power grants them a degree of reliability as constraints (i.e. in the world perceived as out-there). Given a language stance, as Austin (1975) saw, we use pattern to *do things with words*. While languaging often serves as background to coordination, the words actually spoken can also be used as foreground, and in reflection. Indeed, writing and reading favor just such enskillment. As Trybulec (2019) suggests, the resulting artifacts, genres, and institutions transform culture. With literacy, language-as-pattern increasingly transforms the human world and, thus, how people use its resources to gain cognitive flexibility. Perceiving pattern enables people to use talk about talking (and its formalizations) to devise practices. At once, so-called words set off connotations that permit innovative ways of coordinating. Organizations, groups, and individuals use ensembles of verbal patterns (or second-order constructs) in language games that minimize the role of embodiment and materiality (first-order activity). We develop genres, educational institutions, and use written and electronic systems to focus attention the literal, denotational, and formal: given their importance, it is all too easy to forget that, necessarily, these draw on human living.

As coordinated coordinating, languaging links physical wordings with praxis that binds together life, society, and cognition. It meshes patterns with

activity as people endlessly re-evoke ways of connecting bodies, brains and practices. As for life and cognition, languaging needs is no "center": synchronic types need only be fictional (even when associated with material marks). Far from reducing to form/function, languaging sustains the co-constructed realities and ways of perceiving that Kravchenko (2011) sees as the basis for a bio-cognitive epistemology:

- In human life-worlds, languaging makes observing – not speaking – primary.
- As observers, we perceive language as product and activity: as actors, we use relational materiality (e.g. by reading written traces) and, yet, talking/thinking enact relational dynamics.
- Embodied signs (or "wordings") are intrinsic to adapting to and, ultimately, controlling the domain of human existence.
- Knowing is connotational while derived from a history of orienting to the orientations of others in a consensual domain.[20]

Knowing builds on what a person understands. In Kravchenko's (2011) terms, therefore, it depends on an observer. In tracing knowing to, not an external reality, but a person, the shift is monumental. It allows knowledge of one kind – that which is shareable – to link a history of perceiving-and-acting with what is out-there. Of course, the results can be, to a greater or lesser extent, integrated with a person's own. By starting with linguistic interactions, Kravchenko (2011) denies that what is said (or written) grounds knowing. Rather, observers link fictional relations ("verbal pattern") and their products (inscriptions) with what he terms operations: in Harris's (1981) terms, we draw on the *language myth*. Echoing Morris, languaging, as Kravchenko re-affirms, is able to extend the sensorium. What is present to an observer depends on belief in classes of sames. Like frogs or computers, we are said to *categorize*. Yet, whether attributed to machines, frogs, or persons, the act of categorizing presupposes an observer and, by the same token, verbal fictions. When a frog discriminates between flies and pellets or a program places input in sets, the frog/program "possesses" no such categories: there are imposed on the world by a person who takes a language stance.

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20 He also argues that "universal grammar" has a phenomenological status that gives an experiential nature to grammar as suggested by Bod (1998), Deacon (2003), and Geeraerts (2006).

Categorizing draws on how languaging is imagined, typically with the help of media (i.e. in line with folk wisdom). Especially in literate communities, it is hard not to believe in words, sentences, and discrete kinds of meaning. In such domains, the language stance has great importance: once literacy evolves, society can make extensive use of fictions such as *words* and *numbers*. At root, however, these are back-projections of physical events that shape inscriptions or digits: they are products of languaging and doing mathematics. As Saussure saw, much depends on a folk *point of view*. In striving for a linguistics that left aside physical wordings, he masked how people understand, act, speak, and think (in his work, this was neither *langue* nor *parole* but, rather, *langage*). As a result, he promoted a perspective that replaces cognition and space-time dynamics with entities like languages, use, and usage – abstractions that are still central to linguistics. Conversely, in turning to activity and the transformational power of languaging, these constructs are revalued. They have little bearing on Love's (2004) *first-order activity*, Cowley's (2014b) *linguistic embodiment*, Kravchenko's (2008) *total process*, or Humbolt's (1999) *energeia*. Thus, if linguistic entities are fictions, people need linguistic embodiment: they make use of languaging to think, sing, watch television, use a computer, dream, shout, etc. Accordingly, one cannot eliminate connotation from how a person speaks, displays, feels, and thinks and, of course, the effects on ongoing activity, total language, and how social conditions affect the living world.

The distributed perspective places communities within languaging. As people happen, we use the language stance to orient to things (Gahrn-Andersen 2019), events, ways of perceiving, and, above all, each other. A person uses an epigenetic history, imagined realities, and, of course, skilled modes of action. As a result, while learning through exposure and habit, persons individuate as languagers. We deploy our powers in an "operational domain" or a community (with a very specific history). While the results of languaging can be described as semiotic, in Maturana's terms, we rely on "a generative mechanism that gives rise to the dynamics of interactions and the coordination of actions" (Maturana 1988: 45). The total social process enables people to speak/listen or, if wordings are inscribed, make/construe written marks. Observers thus vary coordinating and attending: they speak, listen, and read unthinkingly or, indeed, willfully use physical wordings and equipment. Much depends on reasonably coherent ideational/attitudinal bundles of habits, beliefs, knowledge, and fears. Human subjectivity is socially derived: while languaging is epistemic, as others have also affirmed, it is also phatic, musical, ludic, and profoundly perspectival.

6 Ecolinguistics: Languaging and responsibility for the living

In denying that languaging reduces to language use, as Wheeler (2004) argues, it resembles an "ultimate artifact" that extends a person's powers. However, languaging is not just pattern that is 'used': particular bodies also bring forth each other by meshing vocalization, gesture, and action. Activity is integrated with human living as persons mesh the said, the saying, materiality, dialogicality, and imagination. Given this large picture, Kravchenko (2016) sees a way to healing divisions in ecolinguistics. Echoing Steffensen and Fill (2014), he strives to unify the symbolic, natural, sociocultural, and cognitive domains. This can be done, as they suggest, by taking a specific view of the field:

> Ecolinguistics is (1) the study of the processes and activities through which human beings – at individual, group, population and species levels – exploit their environment in order to create an extended, sense-saturated ecology that supports their existential trajectories, as well as (2) the study of the organismic, societal and ecosystemic limits of such processes and activities, i.e. the carrying capacities for upholding a sound and healthy existence for both human and non-human life on all levels. (Steffensen and Fill 2014: 21)

Persons make distinctions as languaging affects the "evolution of our species in ontogeny and phylogeny" (Kravchenko 2016: 112). It changes praxis, linguistic products, experience, and how humans develop. In personal scales, it influences what we know, skills based on a language stance, and, of course, the languaging of social life. The view opens up a radical ecolinguistics that looks beyond sociolinguistics, discourse, or narrative. Rather, it turns to "the nature and function of language as a mode of organization of the living system (society) and its role in the development of the brain, mind, and (self) consciousness" (Kravchenko 2016: 112). Further, as people happen in language, one turns from "value-free" science. Indeed, people also bring forth religion, art, and law – all of which impact on each living bio-ecology. Ecolinguistics can aspire to be a practical field that promotes positive action. On an optimistic view, the field can contribute to the future of evolution.

As we grasp that we are of the bio-ecology, the concept of languaging forces itself on us. In Rappaport's (1999) terms, we grasp that humans, only humans, can think on behalf of the world. Crucially, languaging enacts direct experience of living. In thinking on behalf of the world, first-order experience can be used to inform both individual and collective ways of taking responsibility. It is up to persons-in-communities to develop modes of socio-cultural action and, as Haj Ross suggests in the epigraph, new ways of languaging. The future of evolution

depends on, not just knowledge, but action by human collectives. In appeal to social subjects, one challenges positivism, behaviorism, and cognitivism. The future depends both on understanding what it is to be alive as and also data sets that shape technoscientific knowing. As for Mulcaster (1582), languaging holds us back while, at once, aiding our *understanding*. In reading the classics, it prompts not-yet-lived experience and, in looking to the future, it demands imagination. We can use languaging to link the poetic, metaphor, particulars, and, of course, facts. As learners, we can use attending and reflexivity to self-fabricate new modes of human flexibility (and ways of overcoming culture-induced blindness). Yet, as living systems, we rely on languaging to shape lived experience. Though we inhabit history, we can transform social praxis.

We enact interdependencies of embodiment, social activity, and observing: all activities involving language can be seen as pertaining to the life sciences. Social activity arises as people vary how they attend to physical wordings. In deflating technoscience, ecolinguists can promote direct and mediated experience that readies individuals and communities for social transition. In Cobley's (2016) terms, iconic and indexical sensitivity can re-activate the epistemic, poetic, and the ludic. Yet, the humanistic focus is to be treated with care. While textual analysis matters, bio-ecological awareness may be especially important in rethinking ways of improving human well-being. By grasping the value of feeling inclusion in the living, people may develop new ways of supporting biodiversity. On such a view, ecolinguistics has many responsibilities. It can use the concept of languaging to combat the negative influences of industrialization, informatics, and other threats to bio-ecological well-being: in Maturana's (1978) words, it draws on "the subject-dependent nature of our science." Humans influence life on earth, and, as we do so, we see that the future will depend on using old linguistic patterns to promote new positive action through languaging.

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Bionote

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