Why Language Kills: Semantic Patterns of (Self-)Destruction

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> Context • Mark Johnson and George Lakoff in their theory of metaphor hypothesized that our experience provides certain linguistically traceable patterns that we "live by." Back in the 1930s, the founder of general semantics, Alfred Korzybski, expressed the opposite idea: With language we develop harmful semantic patterns that we can die of. **> Problem** • The assumption that language kills and that humans tend to construct their realities in a destructive way by force of linguistic habits may sound radical. We aim to elaborate on ways in which our individual capacity for abstract thought gives rise to harmful semantic patterns of experience. **> Method** • Using the method of conceptual analysis, we compare five contemporary constructivist approaches to language and cognition with Korzybski's theory of general semantics. **> Results** • Our analysis reveals that embodiment, radical constructivism, biocognitivism, enactivism and bounded rationality implicitly approach the problem of semantic disorders that result from our species-specific cognitive mechanisms of interaction with our experiential world. Drawing on different terminology and using different conceptual angles, followers of these schools of thought emphasize that our semantic adaptation to the surrounding world can be destructive under certain circumstances and lead us to a delusional identification of some source with some target, which can dangerously affect the way we behave towards others and ourselves. **> Implications** • Our analysis of semantic patterns of (self-)destruction across different constructivist approaches elucidates the nature of knowledge and meaning and allows for a better understanding of major social and even political problems, such as the inability to reach compromises and tendency to use violence instead of peaceful dialogue. **> Constructivist content** • We build on such constructivist notions as image schemas, embodied reason, morphism, experiential coherences, experiential domains, coordinations of behavior, enaction and others. **> Key words** • **Fallacy of identity, general semantics, genetic epistemology, image schemas, operational thought, domains of experience, cognitive biases, heuristics**.

Introduction

« 1 » In today's world of raging wars, where physical violence and hate speech are becoming a more popular tool of managing uncertainty than negotiation and diplomacy, one may justifiably wonder why humans construct their realities in a destructive way. Clinging to the concepts of viability, survival and adaptivity as basic organismic needs and values may no longer help us to explain why more and more people are oriented towards self-destruction by suicides or getting entrapped in totalitarian sects and mass psychosis (Kravchenko 2020a: 91).

« 2 » Early ethnomethodological studies revealed that suicide is a better way for some to find meaning and check whether "anybody cares" (Sacks 1995), while at the heart of terrorism and mass murder is "category work" [1] (Eglin & Hester 1999: 264). In social science and psychology, destruction that people tolerate and even cause to themselves and others is the result of specific states of knowing and believing – choosing not to know, or denying it (Cohen 2001), and believing that it is part of a "just world" (Lerner 1980). Perpetrators may construe themselves as victims (Harsey 2017) and/or engage in deception by "active manipulation of the short- and long-term dynamics of social cognitive systems" (Kronsted at al. 2024: 4) to justify violence. Suicidal people may be unconscious of their pathological experience, suffering from delusional disorders (González-Rodríguez & Seeman 2020).

« 3 » The question of why humans are so easily misled into choosing death over life, destruction over flourishing, insanity over science became a primary concern for the founder of general semantics, Alfred Korzybski, in the 1930s. The second edition of his *Science and Sanity* was published when WWII had already broken out and was about to escalate into the bloodiest conflict humanity has ever known. Linking philosophy of science, mind and language with logic, physiology and psychiatry, he was ahead of his time with a theory of semantic reactions[2]

1| By categorization work Peter Eglin understands the use of the properties of language, culture, courses of action and settings to make persons' identities, actions and other attributes that are "the background features of everyday life" deliberately foregrounded, or observable-reportable for the occasion. By doing this work, people (i.e., members) orient themselves in the world they populate (i.e., population) (Eglin 2002).

2| Semantic reaction can be defined as a behavior in response to abstractions from (ab-

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that in a certain way anticipated radical constructivist and 4E cognition epistemology. Korzybski argued that language, in the way that we inherited it from our remote ancestors, does more harm than good to our organism, as its antiquated structure reinforces patterns of experience that no longer help us to deal with the new social realities of diversity and scientific achievements.

« 4 » Although in constructivism reciprocity between language and experience has long been recognized and researched as a human's cognitive dynamics in social and cultural praxis (Kravchenko 2022), the assumption that our "semantic living" (Maturana 2006) may be far from healthy sounds new and even radical. In this article, we intend to analyze the relevance of Korzybski's theory to the modern conceptions of experience construction, such as enactivist and biocognitive accounts of languaging, embodied views of semantics and decision making, and genetic perspectives on knowing and learning.

Korzybski's theory of orders of abstraction

« 5 » In this section, we will outline Korzybski's theory of abstraction and make an attempt at its constructivist interpretation. Although some terms he used (and coined), such as "semantic reaction," or "the world," imply a somewhat realist perspective and present a challenge in this sense, we will proceed from the assumption that Korzybski held an agnostic view of mind-independent reality, which brings him closer to constructivism.

Neurology and psychophysiology of language

« 6 » Korzybski described language as a human psychophysiological function centered on the capacity of the nervous system to respond to stimuli in a certain psychochemical way. Any impact on the organism is treated as an electrical current that triggers a chain of irreversible chemical reactions that change the nervous system itself. This neurological feature of circularity turns an organism into "a living process, an electrocolloidal transformation" (Korzybski 1939: 3). Korzybski uses the term "structure" to refer to both the process and results of such neurological transformations, claiming that all knowledge is structure developed from itself out of environmental impacts. It is a "human-natural-history" structural claim that psychological functions are circular.

« 7 » He takes what contemporary cognitivists would call an exaptative[3] and evolutionary view of the brain as a "cosmic corn" in which layers upon layers were formed as a result of environmental "impact upon impact" (ibid). The latest are linguistic layers that evolved into the new brain – the cortex. The "old brain," thalamus, remains linguistically intact and cannot change by verbiage because it brings about physical sensations and impressions. It "does not understand cortical means" (ibid: 4), it can only be impacted by them. The same applies to the cortex: language can be changed only by linguistic means, which makes language a self-reflexive process and, to a certain extent, enclosed within the higher-order neurological transformation it has achieved. The higher, psychological, level of neurological functioning is supposed to coordinate and control the lower, physiological one, but since linguistic structure is "time-binding" (Korzybski 1950), purposed to preserve the "thalamic experiences" and delay reactions to them, the coordinations are usually not "timely" and fall behind with the fluid environment. Because of the semantic pressure, our movements tend to be out of tune with the faster-moving and changing surroundings. As a result, instead of "protecting" the thalamus, language adds to unnecessary and even harmful excitation (Korzybski 1939: 4).

Aristotle, language and semantic disorders

« 8 » Korzybski uses the exaptative perspective on the human brain, mind and language to explain why animals are more fit than humans for the conservation of their species and evolutionary changes in their bodily habits and even bodily makeup to adapt to the changing environment. Unlike humans, animals do not inherit a capacity for delusional behavior. Every part of their body and the coordinations it produces work for better adjustment to their habitat. Neural resources of an organism are seldom "wasted" in the course of its interactions. As more neurologically sophisticated living beings, humans seem to pay a high price for their semantic sophistication. The ontogenetically arising ability to use language is phylogenetically constrained in a dangerous way. Korzybski claims that the language children learn today is not up to date and traces its origin to the old Aristotelian "two-valued subject-predicate" structure on which he puts all the blame for semantic dangers.

« 9 » According to Korzybski, the Aristotelian system of knowledge and language was constructed on primitive patterns of thought. "Knowledge in the days of Aristotle was very meager. It was comparatively easy back then to summarize the few facts[4] known, and so to build generalizations which could cover those few facts" (Korzybski 1958: 373). The conditions of life were simple and orientations were on the macroscopic level only (ibid: l). Yet, the modern world of physical disturbances appears entirely different from what our primitive ancestors knew, and neurological patterns of adaptation in the day of Aristotle differed in structure from those of our nervous system today (ibid: 59). The growing cultural diversity, complexity of social relationships and continuous scientific discoveries have changed our life. We have evolved alongside our ecosystem: Thanks to science, we have come to distinguish between phenomena

stractions from) concrete experiences. Given that semantics deals with meaning, and in this article, meaning is also discussed from the perspective of a more-than-human world, we will distinguish between meaning in a broad sense, as a perceived value of a perceived stimulus, and meaning as a semantic value, i.e., an unperceived value of a perceived stimulus.

3| Exaptative is one of the several ways (in addition to embedded, embodied, enactive, emotional and evolutionary) in which mind can be grounded in organism-environment interactions. Exaptation means the use of evolutionarily inherited traits for new purposes, such as the development of larger forebrains in a human from the repurposing of the circuitry types already present in animals (Johnson 2017: 34).

4| Although Korzybski does not explicitly say what he means by "facts," we can infer that for him facts are items of scientific knowledge.

on a submicroscopic level (such as germs) that affect processes in all life forms. What we experience as our environment and ourselves can no longer fit the old, elementary language in which we construct this experience by force of habit.

« 10 » Korzybski gives quite a few examples that show the gap between science[5] and common sense and prove why language in daily use has little value. To begin with, our analytical subject-predicate (view of) language enforced by Aristotle's *Categories* implies that everything can be divided into subject (what/who) and whatever can be said (predicated) of it. This binary breakdown of "everything" we can think of accounts for our tendency to perceive and search for symmetry even where it is not present. If A did something somewhere and B did the same in the same place, we tend to think that A and B are related to each other (e.g., A and B are "they," which means A and B are together, which may also falsely mean that A together with B is the same as B together with A). This illusion of symmetry (and transitivity) of relations is imposed on us by the language we speak and write, the fundamental categories of which, e.g., gender, are based on this same illusion. As a result, it is not surprising that today many still have problems recognizing that people may be (behaviorally and physiologically) not only "he" or "she" but a singular "they."[6]

« 11 » Another illustration Korzybski exploits is that of delusional terms. Experimentally verified theories of field and relativity in physics demonstrated that space cannot be empirically separated from time even though there are two separate words for them, and "matter" is not so "material" and "solid" as the word suggests, but constitutes a process (ibid: 693). Our Aristotelian view of space builds on a bodily based analogy with containers; that is why space is understood as some emptiness to be filled (objects are said to occupy, take up space and room). Yet, Albert Einstein's notion of curvatures proves the reverse: space is a plenum of dynamic relations rather than additive placements of objects. Lay metaphoric terms we use today are unsatisfactory as well and sometimes enact a pre-Copernican understanding of our realities, as in the sentence "The sun rises." As we know today, from science, the sunrise is a linguistic illusion that has nothing to do with the movement of astronomical objects. So, linguistically we tend to introduce additive implications, while empirically we are dealing with most complex non-additive, non-linear higher-degree functions (ibid: 614).

« 12 » Korzybski spares no effort to emphasize the importance of science for human health and well-being: "Humans seldom know by themselves, without science, what is best for them" (ibid: 357). Without science, we lose the ability to make safe assumptions and/or deal with empirical evidence. Even though the word "seat" is linked with the experience of sitting, it should not mislead us into believing that every seat is sittable. The weight and energy of our bodies vary to a great extent.

« 13 » Breaking with scientific conceptualization of our experience, daily language in its linearity and elementality causes semantic troubles preventing harmonious enculturation and amplifying "expectation–outcome" contradictions. Our semantic reactions, owing to harmful Aristotelian orientations, are adjusted to a simpler way of life, free from human-made complications (ibid: 397). As a result, we become –

> "semantic victims of the primitive doctrines which underlie the Aristotelian structure of our language, and so we populate the world around us with semantic phantoms which add to our fears and worries and mental illnesses." (ibid: 199)

Levels of abstraction

« 14 » Korzybski approached abstraction as an organic life-maintaining process that has much in common with biological assimilation. When absorbing or photosynthesizing a substance, a cell takes in those few molecules as part of its structure that resulted from a physical and chemical breakdown of the substance. On the one hand, this organic breakdown is essential because it provides a living cell with environmental components that have a nutritional value. On the other hand, breaking the substance down inevitably leads to other components being "discarded" as organically meaningless. Korzybski insisted that, unlike animals and plants, humans have a neurological capacity for abstracting from abstractions without making this process final. However, "taking in" some characteristics of happenings as meaningful parts of experience, humans are not commonly aware of "taking out" many other characteristics of the same happenings. These experientially discarded characteristics do not environmentally disappear, but remain to perform other functions for other organisms. From such a non-positivist view, abstraction is defined as the process of leaving out characteristics without which an event cannot be identical to what we make of it.

« 15 » Korzybski distinguished between non-verbal ("un-speakable") and verbal levels of abstraction, although the number of levels varies from four (Korzybski 1951) to five (Korzybski 1958). The first level is "*event*" – the unseen physico-chemical processes on the submicroscopic level that constitute stimuli registered by our nervous system (1958: 447). These are "internal or external happenings" (1951). The second un-speakable level is "*object*" – an item of perception, something that we can see or use in our practical, "material," actions. The object is a sensorimotor result of the psychochemical process. The third level is "*label*." It is an unspeakable psychological level on which we react to sensorimotor objects semantically by being "silently" aware of them through the linguistic label we ascribe to them. On this level, objects of perception and action are transformed into objects of knowledge. The fourth, genuinely verbal level, is called "*description*." It is where objects of knowledge are described and talked about. Finally, the level of "*inference*" is a higher-order reaction to description when we abstract particular characteristics from what is said and make a new statement about the statement. On this level, our abstraction does not stop, as we can proceed to make inferences from inferences. Higher-

5| Although Korzybski does not explain what exactly he understands by science, we still cannot find any direct evidence of his objectivist or realist stance on it. Rather, we interpret 'Korzybski's science' to be a type of knowledge that is far more rigorous, valid and experientially tested than any other types of knowledge.

6| Ironically, such a (linguistic) bias towards transitivity and symmetry often surfaces in linguistics itself that tends to prefer 'either-or' over 'both-and' approaches to meaning (Fomina 2020).

order abstractions affect lower ones in feedback loops: Our inferences can change not only how we describe a happening, but what we feel, see and think because of it.

« 16 » Korzybski reiterates that each level has its own value for the human organism that is preserved only as part of the process that takes place on a particular level but is lost if it is "translated" onto another level. If we feel something, we should evaluate it as a feeling. If we "express" what we feel, we should evaluate it as descriptions rather than feelings proper. If we think that others feel something, we ascribe what we think we feel to others and should evaluate these ascriptions as our inferences from our descriptions of our feelings rather than others' feelings (Korzybski 1958: 359). Moving up the abstraction ladder, we lose the un-speakable character of our immediate experience and rarely are we aware that we lose it for good, because to "re-translate" a higher-order abstraction into a lower-order one is to engage in a new neurological transformation. Korzybski points out that "the only way to function on the un-speakable level of abstraction is to be silent outwardly as well as inwardly" (ibid: 637), which can be achieved only through the "undefined terms" that are at the core of meanings and linguistic schemes.

« 17 » We will make it more explicit what Korzybski understood by the problem of the definition of terms. He believed that in the natural course of experience we first and foremost deal with processes that are *im*pressions – something felt or sensed inside our skin, while language as a means of *ex*pression is oriented outwards. According to this logic, the inside is the primary source of meaning: Genuine experiences as stimuli come first and linguistic labels as acquired bodily reactions to them should come second. This order is reversed, because, from birth, children are immersed in a linguistic environment where words spoken are their first impressions and come to be associated with other impressions before children learn to express anything with these words.

Fallacy of identity

« 18 » Identity occurs when plurality is reduced and differences are blurred. In terms of mathematics, for example, recognizing that A=B, we deny both of the entities the basis for independent and self-sufficient existence; one of them (A or B) or both have to nominally disappear and/or be replaced with their numerical value. Two identical names cannot function mathematically in further calculations. It appears that identification technically results in eliminating entities.

« 19 » For a human organism, identification comes as a tendency to simplify the experiential world for quicker reactions to disturbances. However, quicker does not mean better. According to Korzybski, it is this primitive semantic tendency of over-emotional generalization of similarity, equivalence, equipollence to the level of absolute sameness in all respects that, "in a world of ever-changing processes and a human world of indefinitely many orders of abstractions, appears as a structural impossibility" (ibid: 400). When we commit a fallacy of identity, we do not deal with absolute individuals and instead make them similar, placing them under some umbrella category or class term. This cognitive mechanism is typical of "infantile thinking" natural at every primitive stage of human development.

« 20 » The danger of identity is in that it "became systematized and structurally embodied in this most important tool of daily use called 'language'" (ibid: 372). When we make abstractions from our feelings, and then perceptions, and then knowledge, and then descriptions of knowledge, we construct different entities out of one neural stimulus. Nevertheless, due to the Aristotelian structure of our language we "have *one* name for at least *four* entirely different entities" (ibid: 456, emphasis in the original) and have identification greatly facilitated, if not induced because of that (ibid). Korzybski believes that the main linguistic facilitator of intellectual primitivity is the verb "be" that imposes on us the delusion of "allness" and sameness found nowhere in the empirical world (ibid: 482).

« 21 » We will illustrate what Korzybski means. An apple can be basically defined as (a) a combination of sweet and sour tastes, (b) a round object of a particular color, (c) a piece of fruit, (d) a healthy tasty snack, etc. Indeed, these characteristics have different orders of abstraction and if we identify an apple with all of these characteristics (as one might when asked to define an apple), without being aware that the process of abstraction inevitably leaves something out, we risk falling victim to the dogma that "an apple is what we now know it is" and cannot be what we have not yet grasped about it. In effect, an apple can be not only a combination of particular tastes, but odors as well; its shape can be "far from" round if cut in half; it can also be a well-known brand name or a code word for some insiders of some game; finally, apples can be very unhealthy for those who are allergic to them. When we say "The apple is sweet," we are operating across two levels of abstraction – the objective and labeling ones. We are feeling something "privately" and using a well-known term to make this feeling "public," i.e., more relatable to others. Through the "is" of identity, we may unwittingly confuse the two orders of abstraction to think that the term, rather than our own sensation, is sweet[7] and that others who use this term experience the same sensation. Rejecting the old language habits and introducing ordinality to the meaning of words can help us become aware that "The apple is sweet" is a shorthand for "What I am referring to as 'the apple' tastes sweet to me." Although it may seem like an exaggeration, this example shows which pattern of language use can lead to dogmas and which is a healthier one: The latter statement brings forth a less egocentric and more open-minded outlook conducive to mental and social well-being, while committing a fallacy of identity and forgetting the "is not" of abstraction in the former, we fail to appreciate the diversity of our life and plurality of others around us, making our engagement with them maladaptive.

7| Korzybski (Derks & Hollander 1996: 58) pointed out that we fool ourselves into believing that words identify with experience. In a little experiment he brought a package of cakes to a lecture and asked his students to eat them, saying that they were very tasty homemade cakes. The students did so and confirmed his words. Then, Korzybski showed them the label on the package that said "dog's food." Upon hearing this, the students began to cough in disgust. He concluded that the students believed that what was tasty or disgusting was not the food they ate but the words he uttered.

Summary

« 22 » All in all, it can be argued that Korzybski's theory of general semantics, better known for its "the map is not the territory" approach to the relationship between a model and the alleged reality it depicts, took linguistics one step further from representationalist philosophy into a cross-disciplinary domain of natural and exact sciences. Taking an agnostic view of reality and absolute truth, he proclaimed the primary importance of value-based and structurally adequate (co-evolving) interaction with one's environment. Korzybski's understanding of language is based on three important assumptions:

a Language is grounded in human biology, which puts constraints on the way we abstract our experiences.
b It is a developmental achievement, a structural formation of brain–body functioning that enables us to react semantically to disturbances and to shape and infinitely transform experience that builds on them.
c It is conservative inasmuch as it enacts a history of semantic living.

Each of these assumptions could be provided with a stronger theoretical basis and experimental evidence across different constructivism-related cognitive disciplines. However, what Korzybski also implied in his "the map is not the territory" approach – the message that "language kills" by making its user accept the absolute sameness of different entities – has never been duly elaborated. We propose that an analysis[8] of ways in which humans semantically adapt to the changing environment by constructing an identity between different experiences of this environment will help bridge the theoretical gap. Tracing the roots of killer delusions and fallacious reasoning (such as those causing psychoses) to human-specific patterns of bodily experience and interaction, we aim to illuminate the constructivist nature of semantic reactions, as well as reasons why the latter may be unhealthy.

8| In particular, conceptual analysis, as we rely on different constructivist and cognitivist concepts as units of theoretical knowledge.

Language and patterns of experience in the constructivist framework

« 23 » In what follows we will give an overview of those modern constructivist conceptions of mind and language that come insightfully close to Korzybski's theory of the semantic dangers that our language poses to us on the organismic level.

Embodied feelings, image-schemas and metaphors

« 24 » George Lakoff and Mark Johnson, in their ground-breaking *Metaphors We Live By*, gave an embodied account of thought and imagination that develop out of our bodily capacity to "experience and understand one thing in terms of another" (Lakoff & Johnson 1980: 5). In a series of publications that followed, each of them garnered evidence from neurophysiology and developmental psychology to demonstrate that the mind is in the body and the body is in the mind, thus our language is sculpted by patterns of experience that we have inside ourselves.

« 25 » Philosophy of "language in the flesh" can be used to explain Korzybski's fallacy of identity as an unconscious metaphorical extension of experienced regularities that, on the one hand, leads us towards a new understanding of our experienced world but, on the other hand, orients us "backwards" by coloring this understanding with patterns of prior experience. Metaphors are "double-edged swords" of our semantic life: they provide a cognitive shortcut to the growing complexity of our experienced world, yet they do not provide an entirely transformative experience. Metaphors do not need a new word to produce a new meaning, allowing us to use old sources, which may not always be adaptively viable. As William James put it,

> "We always try to name a new experience in some way which will assimilate it to what we already know. We hate anything absolutely new, anything without a name, and for which a name must be forged. So we take the nearest name, even though it be inappropriate." (James 1925: 87)

« 26 » Metaphors are not merely a linguistic matter. They are mechanisms of our movement up and down the abstraction ladder without our even being aware of it. They conserve what we have learnt and give rise to, and constrain, what we are yet to learn. This may be a good reason why humans conflate orders of abstraction (Kravchenko 2020b). Although goal-oriented living beings, we do have a retroactive cognitive tendency: "we live towards and understand backwards" (James 1911: 50): "so far as we are just mere bundles of habit, we are stereotyped creatures, imitators and copiers of our past selves" (James 1925: 40). All that we know on a higher level of abstraction is under such great influence from "prior habit" (Dewey 1988: 25) that it becomes difficult to see the difference.

« 27 » Johnson and his followers treat cognitive processing as a multi-order, nonlinear self-modulating neural activity that occurs as a result of weighted connections among functional neural assemblies. In many respects the hierarchy of chemical neural connections enabling "electrical" movement from one set of neurons to another appears similar to the "electro-colloidal" processing proposed by Korzybski.

« 28 » Korzybski's first order of abstraction, the psycho-chemical process, is embodied as "a *feeling of being*." In this stage, there is an "unanalyzed whole" with which all thought and action begins (Dewey 1987: 249). It is the ongoing experiential flux saturated with "affect contours" (Johnson 1999). On this neurophysiological level, an organism deals with the undiscriminated continuous flow of homeostatic feelings that –

> "arise from the uninterrupted process of life regulation and correspond to both salient physiological fluctuations such as hunger, pain, well-being, or malaise, as well as to states closer to metabolic equilibrium and best described as feelings of life/existence, such as breathing or body temperature." (Damasio & Damasio 2023: 277)

Such "deep feelings" are the source of consciousness (Damasio & Damasio 2022) and "provide ongoing contact with our situation at the most primordial level where we feel ourselves in our environment" (Johnson 2017). In this stage, life is reduced to the basic "need for being" and all understanding is based on processes "in the flesh." For example, what we experience in our adult life

as affection, through our ways of perceiving, acting and thinking, is totally amodal to the newly born baby and is "understood" by her in terms of the homeostatic feeling of warmth. This is the stage where first "sensory identification" occurs and one feeling is conflated with another (Johnson 1997).

« 29 » The second is the level of sensorimotor discrimination that gives rise to different domains (or modalities) of experience determined by kinesthetic, perceptual and motor capacities, and recurring patterns of their meaningful integration (*image-schemas*) (Johnson 1987; Lakoff 1987; Lakoff & Johnson 1999). Image schemas can be construed as the results of bodily processes felt and distinguished on the sensorimotor level: The infant perceives her/others' motion, moves as she and others perceive, touches what she and others perceive, etc. and thereby mirror connections are established between these capacities to enable patterns of "cross-modal" experience (Johnson 1999). Given that these sensorimotor patterns are the only reliable way for the organism to deal with what happens to its body,[9] we can describe image schemas as projections of sensorimotor capacities onto the experiences. In other words, everything exists for the infant in a bodily way: whatever or whoever can be interacted with becomes touchable, movable, visible, etc. in all the directions and combinations affordable for producing and repeating a certain meaningful physical experience. Some of the patterns that the infant orients herself to in her understanding of the situation are up, down, part-whole, containment image schemas. The surrounding "out there" is grasped only in its visible, touchable or audible relation to the embodied "in here."

« 30 » As the child explores more relations and engages with nonphysical objects, she needs to better understand what is "out there." At this level, she draws on image schemas and forms propositional knowledge via *metaphorical extensions* of sensorimotor domains to a new, conceptual one.[10] Metaphors are defined as unconscious and conscious cross-domain correlations based on coactivations of neural maps in different parts of the brain. These coactivations result in the establishment of long-term neural connections (potentiations) between two functional clusters and the formation of a complex neural binding. In plain terms, a new process or object that cannot be immediately perceived is grasped in an interrelationship with a more familiar sensorimotor process or object and, due to language, this functional interdependence turns into a fixed pattern. It can be argued that conceptual metaphors account for the linguistic identity between the source and the target phenomena, which, as Korzybski insisted, may cause semantic problems. For example, the Aristotelian metaphor categories are containers imposes an infantile, corporeal logic of the excluded middle on our conceptualization of what we experience. This classical, objectivist semantics is incompatible with modern science and is a remnant of pre-Darwinian philosophy. It does not "accord with phenomena that are central to evolution–variation within species, adaptation to environment, gradual change, gene pools, etc." (Lakoff 1987: 195).

« 31 » The higher levels of knowing are not specifically outlined in the works of Johnson and Lakoff, but they do mention the emergence of *abstract reasoning* and *inferential thinking* from primary conceptual mappings. Any metaphor gives rise to a certain corporeal logic that determines the way we understand, and reason about, different phenomena. For example, from the ideas are objects metaphor we infer that we can give and get, come up with and push ideas, take them in a certain way, etc. All these inferences are grammaticalized as linguistic norms and recur as patterns of thinking and perception that "frame" our further interactions with our social surroundings: Once we see ideas as objects, we expect them to be received after they have been given and are disappointed if it does not happen. Basic metaphorical extensions evolve into complex metaphorical blends via neural "metaphor circuitry" (Lakoff 2014), which accounts for imaginative thought and most abstract knowledge building on such concepts as morality (Johnson 2014) and flourishing (Johnson 2023).

« 32 » The theory of embodiment illuminates the neural basis of our cognition and provides evidence of continuity and circularity between higher-order functions of human intelligence and the physical nature of the human body. Korzybski's idea of losing characteristics during the abstraction process is never made explicit in the embodiment framework. More than that, the conception of the embodied mind seems to reject the cognitive processing pyramid suggested by Korzybski to show how we start with more and end with less as we deal with what happens to us in terms of feelings, perception, labels, descriptions and inferences. Johnson, Lakoff and their followers make a different point: They argue for the capacity of a human organism to extend and enlarge their network of relations through imagination. Indeed, what unites the two theories in an interesting way is that both introduce ordinality as a natural principle of human-specific engagement with one's surroundings. If Korzybski claimed that humans confuse orders of abstraction, proponents of embodiment maintain that we map and bind them through brain circuitry. Confusion is interpreted as unconscious metaphorizing that leads to a lack of awareness of our concepts' deriving from language deriving from metaphors deriving from image schemas deriving from deep feelings. If no such awareness is present, we may fall "semantic victims" to our own language when we refuse to accept that justice, morality and truth, for example, do not come from transcendental sources of values but are based on what and how we feel, perceive and think, acting in different sorts of environment (Johnson 2014).

« 33 » Another interpretation of Korzybski's fallacy of identity can be found in radical and genetic constructivism where abstraction processes are construed as operations and identity is linked to correspondences and morphisms.

9| I use Antonio Damasio's term "what happens" to refer to ways in which the body responds to disturbances by means of emotions (Damasio 1999).

10| Johnson and Lakoff do not seem to go into greater depth about what "propositional knowledge" is and how it is fully enabled by metaphorical extensions. However, an overview of several approaches in their paper opens up new perspectives from which a limitation of one theory may be revisited or even overcome by virtue of another. In particular, what embodied cognitivists referred to as propositional knowledge might be what Jean Piaget (1976) called "verbal intelligence," defining it as the ability to perform reversible operations on one's sensorimotor experience.

Action schemes, morphisms and operations

« 34 » In many respects, the conception of embodied metaphors builds on Jean Piaget's elaborate theory of cognitive development. What Johnson and Lakoff thought of as an image-schematic conceptual mapping of experience from one modality to another, and Korzybski construed as the capacity for movement from a lower order of abstraction to a higher one, Piaget approached as the progression from actions to operations.

« 35 » Piaget did not focus much on the role of the body in reality construction, but he gave a biological account of how thought emerges and develops from experience. At the level of sensorimotor intelligence, actions have a meaning for the cognitive agent and are structured by *schemes* – repetitive and repeatable cycles of action and perception that lead to an expected result. Like image schemas, schemes of action are recurrent and empirical. Piaget explains that repetition is crucial, in this stage, for several reasons. First, it satisfies an inherent organismic need for functional stability and self-maintenance (Piaget 1952: 32). Second, it strengthens familiar schemes and makes reproducible some newly or accidentally performed actions, especially those which had surprising and interesting results. It, in turn, provides the agent with recognitory power. Third, repetition makes experiences similar and, thus, more adaptable through the exercise of what he called "assimilation," whereby increasingly varied objects are incorporated into previous schemes of action and everything new is understood as an instance of something known (Glasersfeld 1995: 62).

« 36 » At this point of sensorimotor learning, experiences are either "repeatable" or not, and all objects and phenomena are related to what the infant can do with them. Such relations are empirical abstractions allowing for the recognition of objects and phenomena as similar to each other by being "doable" in a similar way, i.e., by being structurally similar to the infant's body. This is the stage when experiential reality begins to be taken in "two-getherness." Although Piaget never used this term, he described the ability to establish pairings with a more mathematical concept "*morphism*." Morphisms are defined as structural correspondences, "comparisons [that] consist essentially in discovering common forms between two structures, two objects, two states, or [two] terms [that are] to be compared, whatever their number or their nature" (Piaget 1979: 27). Morphisms allow individuals to transfer a form or, in later stages, a conceptual mapping to objects and permit the evaluation of identity, similarity, and equivalency across objects based upon the correspondences between their structural relations (Piaget & Garcia 1991: 131).

« 37 » In childhood, at the preoperational level, the logic of actions is *intramorphic*[11] and is still based on the principle of empirical repeatability, but the child can already construct relations and recognize differences, adapting (accommodating) them to her needs, goals and practical interests. Intramorphisms are, thus, egocentric and are often characterized by polarized thinking. As the initial state of an action is mapped onto the final state, only one of them "remains" while the other is excluded. What comes to be meaningful is the material result of an empirical manipulation, and initial states that usually lie outside of empirical control are not grasped as different and are identified with effects they have produced. Therefore, at the level of intramorphic reasoning, children do not distinguish between the goals and the activities by which they attempt to achieve these goals and are unable to understand change and reciprocity (Piaget 1979: 22). The two-getherness of experiential reality is a practical all-or-nothing affair where an object is "either mine or nobody's"; it exists either here or nowhere, now or never.

« 38 » The *intermorphic* level[12] is the beginning phase of operational thought when initial and final states of interaction are compared and empirical correspondences are noted between them. Yet, the child cannot cognize the variable relation between those states, i.e., the actions modifying one state into the other and forming from them a single, integrated system (Piaget, Henriques & Ascher 1992: 190). Polarized thinking gives way to a binary two-getherness of experiential reality: it is either in here or out there.

« 39 » At the level of *transmorphic*[13] operations, the child has gone all the way in her cognitive development from repeatable to reversible actions to reach an understanding of logical necessity. She no longer needs to compare initial and final states to determine the consequences of an action. Instead, the child understands from the start that changes found between initial and final states result from operational transformations (Piaget et al.1992: 53). There is a cognitive shift from a morphic focus on states and forms toward a relational focus on dynamics and transformations (Barrouillet & Poirier 1997). Two-getherness of experiential reality begins to be ecological: it is both in here and out there at the same time.[14]

« 40 » Both Korzybski and Piaget exploited the term "abstraction" to account for ways in which complex reasoning about experiential reality builds on situated empirical interactions. Unlike general semantics, Piaget's theory puts an emphasis on mental operations as a transformative power of abstractions. For Piaget, Korzybski's "leaving out characteristics" is not about losing the experience, but a construction of one. Along these lines, Korzybski's non-identity awareness is interpreted as the awareness of one's experiential field (reality) beyond which there is no stepping. Inspired by Piaget's works, Ernst von Glasersfeld tended to draw on what Korzybski called extensional devices to reiterate that *reality* is often conflated with *a* reality (Glasersfeld 1995). This conflation is also typical of science and results

11| Piaget referred to the intramorphic level of cognitive development as the stage at which children construct unidirectional cognitive functions.

12| This is the level of understanding interdependence between two experienced states, or, of the successive application of two, interdependent, empirically bound cognitive functions that were previously only applied successively in isolation from each other at the intramorphic level (Piaget 1976: 138).

13| The transmorphic level of concrete operational thought is characterized by the ability to transform correspondences between experienced states to cognize the "empirical return" of one experienced state into the other.

14| However, this ecology of relations is bound to an empirical domain, as it is only in adolescence that the cognitive agent engages in full-fledged hypothetico-deductive reasoning about possibilities, without having to perceive the consequences of changes.

in fallacious epistemological considerations: an observer's view of an organism in its observed environment is easily confused with an observer's inferences about the view this organism generates within the domain of its own experience (Glasersfeld 2000).

« 41 » Similarly to Johnson and Lakoff, Piaget viewed sensorimotor intelligence, or else, embodied reasoning, as a cognitive stage when a child knows what she knows by schemes of action that have a certain corporeal logic. This logic is binary and builds on empirical pairings, when two states or objects are compared and structurally mapped. As in the theory of embodiment, Piaget pointed out that corporeal logic does not disappear with the "arrival" of language, but continues to apply, in an improved and reconstructed version, to and across later stages of operational thought. This process was referred to as "vertical decalage." Similarly, Johnson and Lakoff's term "image schema" grasps the ability of action patterns to give rise to abstract concepts and images. However, Piaget did not analyze language but used examples from mathematics to show how we come to understand and transform experience through mappings from "source" to "target domains." According to him, such mappings are pre-conceptual and sensorimotor intelligence allows children to recognize functional relations and draw empirical analogies (make morphisms) to produce an understanding of how the experiential world works from what the body does. He makes it clear that preoperational morphisms (intramorphisms) are identifications of the initial state (source) with the final one (target): the final states of an empirical interaction are the only thing that a child knows, thus they become a frame of reference for understanding the initial states. The difference between what is observed "here and now" and what was observed "there and then" is not recognized.

« 42 » In sum, it can be argued that Piaget described the operational mechanism of unconscious metaphors that not so much develop as constrain our thought. More than that, he approached Korzybski's fallacy of identity not as a mere failure to recognize orders of abstraction, but as the inability to construct reflective (and also "reflected") abstractions that "allow" the source and the target to operationally reverse and transform into each other. The question of why language is to blame for the day-to-day commitment of identifications, discussed by Korzybski from the phylogenetic perspective, is not addressed by Piaget. Although another school of constructivism led by Humberto Maturana does not address it either, his biocognitive account of language implicitly offers a new answer.

Coordinations, experiential coherences and domains

« 43 » According to Maturana, language is a human-specific way of being in our environment that makes us aware of who we are: "A human being is a dynamic manner of being in language" (Maturana 2008: 112). Yet, it obscures our understanding of where it comes from as we cannot find ourselves outside of our "praxis of living" (Maturana 1988). In this explanation of human cognition, Maturana takes Korzybski's hierarchy of abstraction one step further and postulates the fundamental principle of recursive behavior.

« 44 » In Korzybski's hierarchy there are static levels below and above with a clear understanding of, at least, where an experience "begins." In Maturana's recursion there is a circular "co-leveling" without a beginning and an end (Glasersfeld 1990). Meaningful objects around us arise as we do things in our doings for the sake of other doings. The "what" and the "how" of our doings form different operational domains, or levels of behavior, or orders of experience, but in "naming-doing" we coordinate them, i.e., make them of the same order. Without such coordination of actions we will fail to produce a third coordination – orientations in others as some new behavior "in-formed" by, or structurally co-adapted to, our behavior (i.e., language proper). Our consensuality will be impossible. In what follows Maturana uses the example of the word "taxi" to show that it is the third coordination of behavior brought forth by the second "an object (as a would-be taxi)" brought forth by the first "carrying and driving around passengers":

> "I claim that whenever we encounter a recursive coordination of behavior, that is, a flow in coordination of coordinations of behavior, we see that something new arises, namely, language. As language arises, objects arise, e.g., the taxis. What is a taxi? What I say is that carrying and driving around passengers as a configuration of behavior coordinated by the second coordination of behavior (first recursion), becomes that configuration of behavior that in a third coordination of behavior (second recursion) appears 'named' taxi. This means that objects arise as coordinations of coordinations of behavior that obscure the behaviors that they coordinate (as taxi obscures carrying)." (Maturana & Poerksen 2004: 91)

« 45 » Recursion gives rise to understanding as the so-called "experiential coherences" are applied. These are the revelation of some regularity in our experiences through the circular operation that validates what we distinguish by how we distinguish it in the experiential domain where we distinguish it (Maturana 2000). In other words, when we specify our experiences, we cannot step outside of the domain brought forth by these experiences as a certain perspective from which we look at, and interact with, the experiential world. When something new is revealed about the "how" of our or others' doings, a new domain is "opened" and we "transition" between domains in an effort to explain experiential incoherences (Maturana 1995). For example, even if a three-year-old uses the word "yesterday," she barely understands what it means in temporal terms because its definition rests on other temporal terms, such as "today" and "tomorrow." Only as she constructs the abstract concept of time through an understanding of how (or better, *when* and *where*) exactly she uses temporal words to mean what she means, will she successfully grasp "yesterday" semantically and begin to experience something new as distinct from what she did when she operated in the domain that was incoherent with the experience of an adult.

« 46 » In Korzybski's terms, this example of revelation and cross-domain operating shows how we become aware of different levels of abstraction to remain sane and semantically healthy. In Maturana's terms, it shows how we become aware of dynamics of production, think and look beyond the resulting "what" into the procedural "how" to understand generative mechanisms of phenomena (Maturana & Verden-Zöller 2008). Functional relations imposed by language

"obscure everything and do not let us see what processes are taking place" (Maturana 2012: 158): When we name things, we tend to forget that naming does not explain them, because things named and their names "happen" in different domains. Maturana formulated it as a systemic law:

> "Systemic Law 3: 'The result of a process does not ever participate in its genesis.' We frequently forget this when we wish to see a purpose in a process, and we argue as if its result were an argument for its occurrence." (Maturana 2008: 84)

« 47 » Thus, Maturana used the notion of domains in a different sense from that of Johnson and Lakoff, but equally emphasized continuity between linguistic and sensorimotor actions, as our experiences are constrained by our ways of having them and constrain what we will experience further. Similarly to Piaget and von Glasersfeld, Maturana drew on recursive doings to account for the emergence of meaning and the construction of new knowledge and experience across domains, or perspectives, that arise in reflective thought (Bunnell & Riegler 2022). Surprisingly, Maturana just like Korzybski, went to considerable length to critique language for the fallacy of process-product identification. When we coordinate our doings in language, we obscure the order in which we do things for these doings to trigger other doings. Indeed, Maturana's process-object-name coordinations are not Korzybski's process-object-label levels of abstraction, as humans do not abstract a process losing its characteristics along the way – they bring forth one behavior from another and behave within the constraints imposed by the behavior produced. Instead of being a matter of losing or gaining, Maturana's coordinations and recursions seem to be about a way of living sustained by one dynamics that engenders another dynamics, the two conflating or meshing with each other. Meaning is an emergence that does not show where it *comes from*. It emerges because it *leads to* another emergence.

« 48 » The idea of a recursive sensorimotor basis of language described by the term "languaging" was later developed by Maturana's followers as part of the enactive approach to cognition.

Enaction, movement and skills

« 49 » While Maturana defines language as behavior that brings forth coordinations that bring forth other coordinations of this behavior and sometimes uses the words "language" and "languaging" interchangeably, enactivists, for the most part, make the distinction clear. They construe languaging as bodily movements that come to be integrated with, and controlled by, ways of perceiving and acting in the course of skill and habit development (Harvey, Gahrn-Andersen & Steffensen 2016; Di Paolo 2021). Language differs from languaging, basically, in the level of skill with which the movement of the eye can control the use of the tongue.

« 50 » We humans have a pragmatic stance to goal-oriented action (Cowley 2021) and use our bodily resources to "have a way with" our experiential reality (Druzhinin & Fomina 2023). Different bodily movements become a tool for performing a meaningful action, as certain patterns are found in them. These patterns are learnt and enacted (repeated) in a new situation "under the supervision" of different bodily organs. With practice, this form of sensorimotor control becomes a new pragmatic tool. That is how language arises: from patterns of tongue use, or gaze-controlled articulatory movements ("repeatables," or "wordings" (Cowley 2011)) perceived as they are enacted, to a mastery of whole-body functions with a distributed form of control (as we can draw on skilled movement in producing repeatables, or evoke repeatables in producing skilled movement, or evoke both repeatables and skilled movement without producing them physically). In this distributed functioning, language reveals its multiscalarity whereby physical and attentional (mental) ways of movement are differentiated and activated to a varying degree of intensity.

« 51 » Enaction is a concept that tackles the phylogenetic plane of language in a most elegant way. Every time we enact some experience to make sense of our surroundings, we draw on a history of our previous actings that determines who we are, both as individuals and the human species. Our skills arise with practices that constrain the rise of these skills (Cowley & Kuhle 2020): We learn to behave verbally in an environment that teaches (makes it possible for) us to behave verbally or, as Korzybski put it, we "inherit" ways of acting to give rise to action. In our linguistic activity we draw on a history of sensitivity to normative, cultural and material contingencies, thus, languaging is, at once, natural – based in expression – and artificial or historically derived (Cowley & Gahrn-Andersen 2022). Children construct their language by finding patterns in the languaging of adults who have done the same and, as evidence suggests, at first, children enact these patterns without being fully aware of what they mean to the adult (e.g., Tomasello 2003) – it is only with time and practice that they come to understand conceptual relations that historically (socioculturally) derive from wordings. That children engage with linguistic signs before learning how to sign(ify) proves that humans at an early age deal with means ahead of meanings. This tendency, according to Korzybski, distorts the natural order of abstraction, as he believed that objects should come first and labels should come second.

« 52 » The theory of the enactive mind centers on the concept of movement as a natural bodily source of meaning and meaning-making practices. Our legs, hands, eyes and tongue move as we e-motion and transition from one state of mind to another (Thompson 2007). Movement gives rise to skills and habits that constrain it and make it repetitive. Language as an actional flow of practices with distributed control integrates different kinds of movement, thus adding motion to the (e-)motioning organism and inducing new movement. At the same time, with induction comes time pressure and loss of perspective, repetitiveness and constraints obscure their own origins by making us feel that they have always been there. Instead of being in and with the body as the only ground where movement is "real," linguistically induced movement gives us a delusional sense of groundedness, as we dissociate the body from the mind, thinking that we are not anchored by the body, but by what it makes us aware of, namely, boundaries. We tend to demarcate one experience from another, making each of them final and stable. As a result, naturally moving in the experiential flux, our mind is felt as if it were moving from one experiential location to another, invading boundaries between them. In other words, perceptions, thoughts and feelings are what moves and is in move-

ment at all times that we engage with our surroundings in a bodily way, yet, we are often under the impression that an independent entity we call "the mind" moves from one thought, perception or feeling to another. If we are not fully aware of the embodied flow of experience, the wandering of our mind begins to hurt:

> "The body is sitting, but the mind is seized constantly by thoughts, feelings, inner conversations, daydreams, fantasies, sleepiness, opinions, theories, judgments about thoughts and feelings, judgments about judgments – a never-ending torrent of disconnected mental events […]." (Varela, Thompson & Rosch 1993: 25)

« 53 » An awareness of the experiential flow and its groundlessness, selflessness, can be achieved by an "un-learning" whereby skills and habits acquired in the actional flow are reflectively reversed and an understanding comes that the movement of the mind has neither beginning nor end. The purpose of the practice is "to become mindful, to experience what one's mind is doing as it does it, to be present with one's mind" (ibid: 23):

> "Each time the meditator realizes that his mind is wandering unmindfully, he is to acknowledge nonjudgmentally that wandering (there are various instructions as to how this is to be done) and bring the mind back to its object." (ibid: 25)

« 54 » Thus, Korzybski's awareness of abstraction is interpreted in enactivism as mindfulness/awareness, or awareness of our awareness. Keeping track of the orders of abstracting processes means being able to "un-enact" our experience and becoming aware that it takes shape in the flow of actions, perceptions and feelings that have no solid ground or objectivity until they are made to recur by skill and force of habit. The fallacy of identity committed in language is the inability to "un-language" our bodily movement and look at it as the source of itself. Based in skilled movement that is naturally learnt without prior skills, languaging obscures the nature of these skills and makes the movement nearly unconscious (at least, non-reflective): Languaging encourages us to move further with our thoughts and feelings instead of "delaying the reaction" (Korzybski 1958). We seldom become aware of *how* and sometimes even *where* we move – we are aware that we simply must move somehow, from and towards somewhere because we already find ourselves "on the move" in languaging. The negative effect of such a "movement trap" can be better illustrated by analogy with drivers' behavior on the road. Violent anger, swearing and other unhealthy "semantic reactions" to the traffic situation result from the (unconscious) desire to move ahead, the faster, the better, which diminishes the ability to make well-informed judgements.

« 55 » Enactivism makes a valuable theoretical contribution to a constructivist interpretation of language in terms of orders of abstraction. Proponents of enactivism draw on the notion of skilled movement to account for the evolution of looking into gesturing, gesturing into talk, talk into text, as well as for the distribution of language across the human sociocultural world. Along these lines, this world is sustained because humans can choose "how much" they should (can) attend to shared practices. However, it does not save us from semantic dangers or even insanity. Allowing us to distribute control over different bodily functions and integrate enacted experiences with events and histories, language can make us feel that we can perceptually control something that is not, or cannot be, physically perceived. It gives us the so-called illusion of control, which can become a source of fallacious reasoning, mistaken beliefs and various types of misdeed. In the next section we will focus on the psychological phenomena of illusions and cognitive biases as another explanatory version of "semantic disorders."

Biases and heuristics

« 56 » The concept of cognitive bias dates back to Amos Tversky and Daniel Kahneman's (1974) research on people's capacity to make judgements under uncertainty. It was established that when people have to, but cannot fully, reason with numbers to calculate the outcome of an event, they draw on so-called heuristics. These are patterns of thought and perception that deviate from rationality and lead to systematic errors in judgment and decision-making (assuming all choices we make are supposed to be rational). Heuristics were proven to be demonstrable limitations that our experience and bodily ways of having it put on our "pure" reason. Tversky and Kahneman were the first to show experimentally how our mind is too embodied to be always accurate, that our rationality is bounded in many ways and that we select (abstract) from a mass of experience those items that agree with how we feel and what we know "here and now." Thus, cognitive biases are instances of this situated feeling and knowing that we rely on when we make such choices. They provide shortcuts, or rather, they are "shortcutting tools" that help to cut a long flow of data short.

« 57 » Biases derive from prior experience and certain dispositions that are based on tendencies to think fast, feel good and do something easy or convenient. While being of certain adaptive value for an individual, these tendencies often result in negative consequences for interpersonal and communal levels of interaction. Choices that may appear satisfactory to a person in the short term can turn out suboptimal for this very person engaged in a network of long-term relationships with others.

« 58 » Heuristics and language go hand in hand. It may even be argued that one is the source of the other and vice versa. We construct our language to simplify our complex interactions with others (Cowley & Gahrn-Andersen 2022) and we simplify our language to construct faster and easier (understandings of our) experiences (Gash 2020). Korzybski's "is" of identity appears to be a more time-saving and convenient way to look at things. Heuristics as patterns of thought and language may also account for many popular beliefs and disbeliefs. When von Glasersfeld (2010), trying to explain why people "dislike radical constructivism," argued that "under stressful circumstances" people avoid taking responsibility for what they say and do, he indirectly tackled the issue of semantic dangers that heuristic patterns of language bring with them. We may give an extended explanation to illustrate what he might have meant. Led by egocentric patterns of thought (e.g., self-serving bias) and linguistic habits of distributing bodily control to others (§§46f), we tend to construe what happens in ways that create a disproportion between the level of our control over the situation and our personal



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feelings about it. As a result, in some cases we may think that others behave the way they do because of us, in other cases, that we behave the way we do because of others. Such a bias can become a source of cognitive distortion that can be overcome when we recognize that we cannot control others and their interactions with us, we can only control ourselves and our interactions with them. We are constructors of our reality as much as others are constructors of theirs.

Conclusion

« 59 » At the beginning of the article, we addressed the reader with questions that Korzybski asked about a hundred years ago. Why do we, languaging encultured humans, use our species-specific means of adaptation to make this adaptation impossible? Why do we reason about the reality we construct in ways that result in its destruction? Why do we start wars and choose to die? These questions seem to challenge constructivist approaches to life and its meaning. The analysis of the role of language and thought in our failures to cope with our changing surroundings offers no less than a constructivist answer: We not only order, but also disorder our experience in semantic ways that are of our own making. Unlike animals who rely on their senses and species-specific patterns of adaption to know an enemy (predator) from a "friend" (a non-threatening specimen), we humans go further and create our enemies from friends by implicitly following (or better, observing) the linguistic tradition of reducing the growing diversity of distinctions our life affords. Eliminating the differences in our experience of a particular living being (including ourselves) and making two experiences into one through the "is" of identity, we tend to make decisions that may kill. As a result of such semantic identification of two experiences, we more often than not end up in a world where "war is peace" and "life is death."

« 60 » The results of our analytic overview of six different approaches to how humans create their subjective "realities" just to be dangerously trapped in them can be summarized in Table 1.

« 61 » The findings of our research make at least two important contributions to constructivism. First, they allow us to conceptualize and raise our awareness of semantic dangers that patterns of our everyday language and thought carry with them. Second, the research results elucidate conceptual continuity between seemingly disparate theoretical stances on language, experience and their construction. This continuity helps to put the method and object of linguistics in perspective. The sooner we understand that linguistics is both a human and a natural science that should aim to investigate the human and the nature that the human finds herself in, forms and transforms by human-specific means, the sooner reductionism of text-oriented studies can be overcome (Druzhinin, Fomina & Polyakov 2020; Kravchenko 2022; Druzhinin & Fomina 2022; Fomina & Druzhinin 2023). In the second stage of our research, we intend to outline and exemplify in greater depth all the major types of identification fallacies that we commit in language. We will also summarize Korzybski's, and make our own, suggestions doe dealing with the dangerously flawed patterns of worldmaking.

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	General Semantics	Embodiment	Genetic Epistemology	Biocognitivism	Enactivism	Bounded rationality
How do we semantically adapt to what happens?	By abstraction we leave out characteristics of phenomena.	By abstraction we derive new knowledge.	By abstraction we construct new knowledge.	Recursion of our behavior brings forth new behavior that is used as a coherence to explain (i.e., evaluate and understand) this new behavior.	We integrate bodily movements with, and control them by, ways of perceiving and acting in the course of skill and habit development.	We process information but this processing has limitations and rational reasoning under uncertainty is bounded by unconscious patterns of experience.
"How much" do we adapt?	There are nonverbal and verbal levels of abstraction.	There are sensorimotor and conceptual domains of experience.	There are levels of (sensorimotor) actions and (mental) operations.	There are different orders of recursive behavior that brings forth domains of experience out of coherences.	There are different levels of skills.	There are rational and irrational choices.
When can it be destructive?	When orders of abstraction are confused, semantic disorders arise.	When two domains are mapped or bound, new knowledge is derived.	Failure to understand relations results from the inability to construct knowledge on a higher operational level.	When behavior is coordinated, this coordination obscures the behavior it coordinates.	With skilled repetition of bodily movements comes the illusion of groundedness.	Situations of uncertainty trigger cognitive biases that lead to errors in judgment.
Why can it be destructive?	Semantic disorders result from primitive patterns of thought that are inherited from the Aristotelian structure of everyday language.	Abstract knowledge derives from image schemas. Our understanding of, and reasoning about, what happens is constrained by basic patterns of experience that come with the body we have from birth.	Verbal intelligence evolves from basic action schemes and bodily ways of their coordination.	Obscurity results from the constraints that our coordinations put on the domain of experience in which we coordinate our behavior.	Groundedness arises from a history of our actions that determines our tendency to transition from a less skilled to a more skilled movement.	Cognitive biases result from prior experience and body-based dispositions.
What exactly is destructive?	The most common disorder is the fallacy of identity – the delusion of sameness in all respects between two entities.	When the sensorimotor domain is mapped onto the conceptual one, it is metaphorically extended. Both domains begin to be experienced in interrelationship with each other and the target domain is understood in terms of the source one. We are often unaware of this metaphorical identity.	Identity occurs on an intramorphic level of thought when two states of an empirical interaction – the initial and the final ones – are compared with (mapped onto) each other structurally and only the final state is recognized and known. On this level change and difference are not properly understood.	Identification occurs when we do not see that processes and their observed results belong to different domains of our experience.	Identification between action and enaction occurs when we become unaware that we reproduce a pattern instead of producing a new action. As a result, our understanding of the situation becomes less context-sensitive.	A computationally complex judgment is substituted with a more easily calculated attribute.

Table 1 • Views on semantic "order and disorder" across constructivist approaches to language, experience and reason.

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