

LINGUISTIC MEANING MEETS LINGUISTIC FORM IN ACTION

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Abstract: In this paper we suggest that Duffley's sign-based semantics rests on two main claims: a methodological one and an ontological one. The methodological one is the analysis of corpora and the ontological one is the postulate of mental content. By adopting a linguistic enactivist perspective with a Wittgensteinian twist, we endorse Duffley's methodological claim and suggest that

a sign-based semantics doesn't have to rely on mental content if it takes into account the conception of meaningful material engagement in cognitive archeology and its development into sign-using as an enactive capacity.

Introduction: Enactivism and Sign-based semantics

In starting this paper we find ourselves immediately faced with a *micro-dilemma*: should we address the author directly, in the second person, or should we opt for a more formal, professional, 'third person' kind of approach?

In view of the social and material¹ constraints of this setting, namely, a written comment on the author's work, to be published in an academic journal, we have sufficient reasons to opt for the formal norm of addressing the author using the third person. Despite that, and in virtue of the social and material constraints of this setting, namely a comment, which is directly addressed to the author and will first be read and replied to by him, we are also inclined to write this more as a letter-like piece and address the author in the second person.

This micro-dilemma, namely, of choosing the proper form of how to address someone in a certain situation, is a typical example of the great number of tensions we navigate everyday as linguistic bodies (see Di Paolo, et. al. 2018). In calling your (yes, you, the reader) attention to this micro-dilemma, and naming it, we are, together with you, reader

¹ Materiality is considered in an enactive perspective as a property of "microscopic and macroscopic systems composed of various interactive elements capable of consuming and dissipating energy and in the process sustaining various kinds of organized patterns" (Di Paolo et. al. 2018, p. 337). Material constraints can be understood as the limiting conditions given by the systems, the environment and their couplings.

(given that you acknowledge it), objectifying a socially meaningful act and making the word ‘micro-dilemma’² a tool.³ In this constant creative activity of turning signs into tools, i.e. in symbolizing, we bring a novel materiality, temporality and asymmetry to acts of linguistic bodies. Symbolizing yields a novel temporality because it allows us to interact with the sign in great temporal distances, not just in person. A novel asymmetry emerges because signs that don’t give us direct contact with their enunciator can acquire contingent powers over us, depending on several factors of how we interact with them. If it is an anonymous letter, for example, with a sentence ‘I know who you are’, one can get paranoid and imagine that the author is someone who has a great power over him, namely, the power of revealing who he actually is.⁴ And a novel materiality comes about because symbolizing institutes a way of referring to something, a new norm, a new way of acting. Think for example about the fairly recent words, ‘mansplaining’, ‘gaslighting’ and also ‘ethnic microaggressions’ (See Sue, 2010) and about how they allow us to act in different ways than we were able to before we were aware of them.

In other words, in symbolizing, we are able to interact with utterances that do not have a specific enunciator (Di

² Here one could say that we are not actually creating a sign, for this word is already known, which means that we are perpetuating a norm. In any case, whether the word is being created at the very moment of the use or just used, it is made available at that moment (in use).

³ In a Wittgensteinian fashion, in which words have diverse functions and similarities as much as the tools of a toolbox (PI §11). *All references to Wittgenstein’s *Philosophical Investigations* follow the pattern: PI and the paragraph.

⁴ You can probably tell by now that we’ve been watching too many spy series!

Paolo, et. al. 2018). Signs (words) are material objects⁵ that we create, thereby expanding the reach of our acts and normativity. In our example, in complying with the third person norm we are recursively perpetuating⁶ a norm and in opting for a letter-like approach, we would be introducing a creative twist to the current norm. Each of these acts could be read in different ways. A third person approach could be taken either as respectful or too distant, for example, and a second person approach could be taken either as friendly or inappropriate. We have decided, then, to address Duffley in both ways, as a reader of this text (2nd person) and as the unique author whose work is under discussion (3rd person). These possible ways of interpreting are as much part of the meaning of the act as the very intention we have to be friendly and respectful. The co-enactment of meaning (or *participatory sense-making*⁷) can, then, be understood as a joint

⁵ ‘Material’ in the sense that they involve the consumption and dissipation of energy to be made and to be interacted with, and ‘objects’ in the sense that they are objectified “as a thing, a *this* that is the object of our treating” (Di Paolo, et. al. 2018), i.e. they are individuated.

⁶ “Bodily social acts replicate, perpetuate, and continuously modify a shared history of sense-making” (Cuffari, 2020, p. 10). A shared history of social sense-making, which is objectified by sign uses, is what gives signs/words their meaning, which we commonly and mistakenly take as content.

⁷ *Participatory sense-making* is the social development of the enactivist notion of *sense-making*. Sense-making is defined as “[t]he active adaptive engagement of an autonomous system with its environment in terms of the differential virtual implications for its ongoing form of life. The basic, most general form of all cognitive and affective activity manifested experientially as a structure of caring” and participatory sense-making is “[s]ense-making in the context of a social interaction as it is affected by coordination patterns, breakdowns, and recoveries undergone during social

organizing activity, in the sense that in any situation there is a plural determination in which several factors occur and weigh in to compose a scenario/situation and determine a use of a sign (which acquires meaning also in this situation). One of the key factors in this interplay of factors are the sedimented practices of tool using: the words or signs.⁸

Duffley's sign-based semantics does not weigh in on the merit of whether signs should be taken as tools in the sense we propose⁹. But it does challenge the orthodoxy on linguistic theory by arguing that semantics and pragmatics

encounters. Participatory sense-making is how people understand each other and how they understand and act on the world together" (Di Paolo, et. al. 2018).

⁸ Though Duffley does not make this explicit, we read his use of 'sign' as referring to words or combinations of words (subsential units). Although he mentions in chapter six that "a few sentence- or construction-level assemblages clearly do have a stable semantic content" (p. 197) he argues throughout the book that this is not the case in the majority of instances.

⁹ His use of this word is in the context of the tools of logic, which is not the meaning we consider here. In chapter five, he refers to Reid (1991) and the way he treats linguistic meaning "as distinguishing tools rather than encoding tools (p. 40)" (apud, p. 190). This is also not the way we are considering tools here. We take signs as tools. We also don't suggest that signs should be divided into kinds of tools, either tools for description, distinction, and the like, because we don't believe one can give such a restrictive account of the many things we can do with language. Signs acquire their function in use, also depending on its history - which is what allows us to talk about the stable meaning of signs - but it is important to keep in mind that the way the sign is used is not given (solely) by properties of the sign. We do acknowledge that it is (might be) possible for linguists to develop a taxonomy of uses, based on corpora investigation, but this follows the requirement of considering language in action/use.

play an important role in syntax and that the three aspects are needed for an explanation of natural language. According to Duffley (2020), one of the main problems with current views on language is that “semantic categories are defined in a priori fashion, independently of any linguistic sign, and then correlations are sought with language-specific linguistic items.” (p. 95). He examines linguistic forms and their uses in English corpora in order to account for the meaning of these signs in terms of associated psychological content, and extracts a few core statements one can derive from this investigation. It is a very sophisticated analysis, which can shed light on linguistic phenomena by means of word uses, we believe, in a Wittgensteinian fashion¹⁰.

In a nutshell, Duffley’s main points rest on the careful demonstration of many cases in which the logical approach to meaning, namely, truth-conditional semantics, (e.g. Kripke, 1972; Putnam, 1975; Chierchia and McConnell-Ginet 1990; Hamblin, 1973; Portner, 2005; Kempson, 1977; and Zimmermann and Sternefeld, 2013) is not sufficient or it is mistaken in accounting for natural language. And he also presents criticism and cases which serve as counter-examples to other theories of meaning, such as Formal Semantics, (e.g. Bach, 2013 and Devitt, 2013) (p. 174), Cognitive Grammar (e.g. Langacker, 2013), Construction Grammar (e.g. Goldberg, 1995), Conceptual Semantics (e.g. Jackendoff 1990, 1991), Natural Semantic Metalanguage (e.g. Wierzbicka, 1972, 2006 and Goddard, 2010), the Prototype theory (Rosch, 1978) and the Conceptual Metaphor Theory (Lakoff and Turner, 1989 and Lakoff and Johnson, 1980).

¹⁰ This fashion is best represented by the following passage: “For a *large* class of cases of the employment of the word “meaning” - though not for *all* - this word can be explained in this way: the meaning of a word is its use in the language.” (PI §43)

Regarding cognitive linguistics in general, he says:

The general moral to be drawn from this critical examination of cognitive linguistics is that although meaning is incontestably a psychological reality, linguistic semantics cannot be reduced to perceptual psychology, nor can cognition be reduced to perception or abstraction to metaphor. (p. 187)

The Columbia School of Linguistics seems to provide the ‘sign-based’ inspiration to Duffley, for he acknowledges that “analytically successful categories take the form of signal-meaning pairs” (Huffman, 2001, p. 21. apud Duffley, 2020, p. 189). But it also receives its share of criticism, regarding the a priori fashion in which invariant meanings are taken to be dependent on markedness (e.g. Tobin, 1993) and regarding its insular, Saussurean “treatment of meaning as mere distinguishing tools” (p. 191).

Thus, based on many case studies, and several arguments positioning his view among other theories, there are two main assumptions underlying Duffley’s view. First, a methodological one, namely, that the observation and careful study of large amounts of data of how sign-sequences are used in real discourse will reveal schemas (eg. the uses of *for*, p. 38), specific/precise uses (eg. the ‘just that’ approach to numerals, p. 55) or parameters (eg. aspectual verbs p. 61) that best describe the meaning of signs. And, second, an ontological one, namely, that such schemas, specific uses and parameters exist as mental contents attached to the signs. Let us call this the *stable meaning of a sign*¹¹ (SMS). In general terms, one can say that the author stands for the position that,

¹¹ Duffley talks in terms of “stable pairings of linguistic form and meaning” (p. 33)

under careful consideration, the many uses of a sign will reveal its underlying stable meaning -the mental content- as he says: “one can explain a whole lot about what linguistic sign-sequences are used to communicate based on what can be deduced about the mental content attached to the signs themselves from an extensive observation of how the latter are used in real discourse situations.” (Duffley, 2020, p. 02)

Here, we will invite the possibility of a compatibility of a sign-based semantics with enactivism. Although we acknowledge it is a radical change, for it requires abandoning the underlying presupposition of mental storage, we believe it might be a fruitful approach, for it allows a dynamic understanding of signs as “metastable emergent constraints” (Di Paolo, et al., p.295). Thus we will proceed by endorsing the methodological assumption and proposing that the ontological assumption may be substituted by an enactivist view.

Given the very short overview, in the beginning of this text, of how normativity is pervasive in our practices in a linguistic enactivist perspective, and of Duffley’s main points, we will proceed by suggesting that a theory of meaning based on use in the sense that we can infer the meaning of a word based on its effects in language (Duffley, 2020, p.43) does not have to rely on mental content as the placeholder of the stable meaning of a sign. We will, then, proceed by suggesting that his view of sign-based semantics does not depend on the existence of mental or cognitive content, and, for this reason it can be compatible with enactive views on language (such as Di Paolo, et. al. 2018; Cuffari, 2020) which deny that our capacity of attributing and understanding meaning is best explained by means of mentally storing and operating with content.

In order to do that we will resort to a Wittgensteinian inspired thought experiment, to cognitive archeology (Malafouris, 2013) and to a recent interpretation of how tool-

making evolved to symbol-making (Gallese, 2020); for, in a linguistic enactivist view, the sign-based meaning capacity we, humans, have directly depends on social and historical practices of objectification by means of joint attention.

We believe that this proposal will do justice to two points raised by Duffley in his book regarding neglected aspects of linguistic theories. First, by the end of chapter four, Duffley calls attention to how cognitive linguistics makes little or no mention of culture, history and the evolution of conceptual systems and refers to Nyckees (2007): “the evolution of linguistic systems and the conceptualizations of which they are constituted involve factors that individual cognition is insufficient to explain because they are a product of the basic intersubjectivity made possible by human language itself. [p.38]” (apud, p. 188). At this point, the reader's attention is immediately drawn to the fact that none of the considered views, namely, formal semantics, cognitive grammar, construction grammar, conceptual semantics, natural semantic and conceptual metaphor, take that into consideration. Our take on cognitive archeology (Malafouris, 2013, 2019) and the evolution of symbol-making (Gallese, 2020) have the benefit of taking this aspect into consideration. Second, that

the foundational relation on which all human language is based is the association between a mind-engendered meaning and a bodily produced sign. It has been my contention in these pages that many of the problems that plague current semantic analyses stem from a neglect of this basic principle. (our emphasis, Duffley, 2020, p. 194)

While we do not endorse a mind-body dualism that may be implicit in this thinking, we agree with Duffley's intuition that there is some foundational relation on which all human

language is based, which has been neglected. We believe that, perhaps, it is precisely by acknowledging our social and evolutionary production of signs and the sedimented meanings by means of habits, that we will be able to regard it.

2. The Linguist's Nightmare, a thought-experiment on mental content

Although our aim in this comment is not to explicitly argue against the ontological claim on mental content, we should illustrate our motivations to reject the idea that the stable meaning of a sign (SMS) is the mental content attached to it, and to favour an enactive perspective. In order to do that, we will resort to the following thought-experiment:

Imagine that you, as a renowned linguist, wake up in an identical world in which the only difference is that the use of the word *for* is not as it is described in your book. Actually, the meaning of *for* is switched with the meaning of *to*. But you are not aware of that. In the morning, you ask your wife: Honey, would you take out the garbage for me please? (let us assume that you both agree that taking out the garbage is your task). And she answers: Do you mean to you? Then, you say: No, I mean for me. She laughs at your joke and says: Sure, honey! And goes on to take the garbage out. Later on, you read the paper: "Toronto's top doctor has 'a lot of hope' students may go for class in person before end of school year". What is going on? You think. These editors are making gross mistakes on the front page! At the university you overhear a conversation: "(...) I can bring your book back for the library to you tomorrow (...)" / "Ah, Thanks! I appreciate it!" Then you start getting a little worried that something is off. But you might have misheard it, so you just ignore it. Before entering your office, a linguist colleague says: "Hi,

Patrick, good for see you.” At this moment you just freeze, wave, and get into your office. What was that? You start questioning your sanity. ‘Have I really heard that right?’. From now on, you check all the grammars you have, including your own book and they all take *for* for *to* and *to* for *for*. What a nightmare!

This thought experiment indicates that it doesn’t matter what the mental content is, if you can’t rely on a joint practice and on an inherited organizing grammar. So, although we do have a capacity to memorize and use signs and words, it is not our mental content that holds the meaning of words (or stable meanings of signs). Actually, we believe that the very idea of a placeholder is a chimera, induced on us by the way we use words such as *content* and *meaning*. We need to shift our attention to an inherited constant social practice allowing the sedimentation of norms by means of material signs if we want to give a proper account of meaning. The main take from this thought experiment is that whatever the SMS is, it is not stored mental content, or, more modestly, it doesn’t have to be.¹²

¹² Our interlocutor could say that it is precisely because he has the SMS as a mental content that he finds the new situation odd. So, the thought experiment is actually suggesting that the mental content of *for* is switched with the mental content of *to* in everyone else, and that they are conventionally associated. We believe that the thought experiment shows that the mental content is not sufficient for holding the SMS, and that a practice and habit of use is necessary for keeping it. Although the thought experiment doesn’t show that the mental content is not necessary, it suggests that it is not relevant, for what matters for the meaning of a sign is the joint/common practice and the abilities of the interlocutors to make sense together.

3. The ontology of the SMSs.

But what can SMS be, if not mental content? In what follows we will draft an alternative.

Obviously, one cannot deny that there is such a thing as the meanings of signs. For we teach them, we change them, we combine them, we use signs for what they mean, etc. In a wittgensteinian fashion, the meaning can be taken to be, in very general terms, what we get when we ask: what does (the sign) mean? And then we receive an answer, either from our caretakers, our teachers, the dictionaries we look into, the books we read, or even when we infer from use. Usually we are given examples and general definitions which are not what Duffley means by the SMS. The stable meaning of a sign needs investigation of many uses and careful consideration, as we see throughout the book. From that analysis, one can easily suppose that we must have these “structures” (these stable meanings) in our minds in order to understand the actual meanings of words in current language usage.

Yet this is a rarified, and reifying, approach to language. One can see that by the passage:

And so we find ourselves with respect to the meaning of *for* in somewhat the same situation as physicists are with respect to the electron: neither the electron nor the potential meaning of *for* can be observed directly; however, from the observation of the range of effects that they are observed to produce, *one can infer that something very much like them must exist* in order to cause such effects. (Duffley, 2020, p. 44, our emphasis)

The picture here is of investigating what is hidden and must exist. This is not a new picture in the philosophy of language, nor in positivist science. Wittgenstein already pointed out the problem with this view, in his terms, namely, of taking the essence of something as more than what is open to view:

For it sees the essence of things not as something that already lies open to view, and that becomes surveyable through a process of ordering, but as something that lies beneath the surface. Something that lies within, which we perceive when we see right into the thing, and which an analysis is supposed to unearth.
 “The essence is hidden from us”: this is the form our problem now assumes. (PI, § 92)

In an enactive perspective, language should be taken first as a practice or activity, therefore, as languaging (Cuffari, 2020; Di Paolo, et. al. 2018).¹³ Sedimented and objectified norms are a second conceptual step in constant and continuous ways of living.

There are two important aspects of languaging we can bring up to illustrate the socially normative and open to view nature of signs and demystify the view that there must be a locus of SMSs and that it must be internal (mental storage): The Material Engagement Theory (henceforth MET, Malafouris, 2013, 2019), and the transition from tools to symbolic practices (Gallese, 2020).

¹³ While the confines of space prevent a longer discussion, the enactive slogan “mind in life” resonates here with the Wittgensteinian approach to language games as forms of life.

In cognitive archaeology (Malafouris, 2013) symbolism is taken to be an evolutionary development¹⁴ of a meaningful engagement with artifacts that brings forth possibilities to act. Artifacts are, then, taken to be material signs; and symbolic practices are illustrated by the historical development of how our concept of number, which is perhaps the paradigm for the symbolic practice, emerged from an activity of commodities exchanging and clay molding.¹⁵ Thus, Malafouris supports the idea that cognitive processes are extracranial material engagements of our bodies with our surroundings.

(...) the material sign is constituted as a meaningful entity not for what it represents but for what it brings forth: the possibility of meaningful engagement. What essentially happens in those cases, put in very simple terms, is that the vague structure of a flexible and inherently meaningless conceptual process (e.g., counting), by being integrated via projection with some stable material structure or thing, is transformed into a perceptual or physical process. However, perceptual operations embody a spatial logic and thus can be directly manipulated and explored in real time and space. Thus, the process becomes meaningful, and I want to suggest that meaningful engagement of material signs is the precondition for the emergence of symbolism. These physical relations and interactions between the body

¹⁴ It occurs, many times, between generations.

¹⁵ See also Rolla and Figueiredo (2021) for a short explanation of this case.

and cultural artifacts should not be taken as mere “indications” of “internal” and invisible mental processes; they should, rather, be taken as an important form of thinking. (Malafouris, 2013, p.106)

But the question underlying Duffley’s assumptions about linguistic form and linguistic meaning is not a question of how artifacts are meaningful to us - how we use them - as much as it is a question about how marks on surfaces (forms) become signs (acquire meaning). One might think that just because material engagements with artifacts are developmental cognitive preconditions for symbolism, it need not follow that symbolism per se is a material engagement. Yet this is exactly what the enactive view of symbolizing proposes (Di Paolo et al. 2018, p. 296).

Gallese (2020) argues that the human mirror system allows us to directly detect the meanings of the actions of others, involving the detection of action courses toward goals and anticipation. In his words, the “discovery of mirror mechanisms in the human brain (...) demonstrates that a direct access to the meaning of others’ behavior is available, without explicitly attributing propositional attitudes to others.” (Gallese, 2020, p.03). This system plastically adapts to a history of experiences (Cook et al. 2014) and contingencies of social interactions (Di Paolo and De Jaegher, 2012).

He also suggests that a given practice that involves, for example, cutting something over a hard surface, say a wood trunk, with a hammerstone, may have been identified as leaving a mark of its occurrence “revealing that a given practice can persist as a material sign that stands for it even when the practice is over and the agent long gone” (Gallese, 2020, p.11).

The two steps we are connecting here are: the identification of marks of actions (Gallese, 2020) and the actual marking for specific purposes (Malafouris, 2013). When the action is the very making of a mark, humans make tools out of marks, and they agree on the meaning of those marks because they share the same practices. The development of the concept of number out of clay is a great example of this second step, for it involves the pressing of hard clay tokens, say, little cones, on wet clay, to purposefully/intentionally mark the token on the clay, thus engraving a sign.

Gallese's question is "how did the new cognitive ability of symbol-making emerge in the first place?" (2020, p.09) And his very plausible answer is that it was "a gradual transition from tool-making to symbol-making" (p.11) which happened thanks to the sophisticated workings of mirror-neurons which allow us to directly detect the meanings of others' actions, the courses of action they take and the traces they leave, which, on its turn, led to an unplanned fortunate discovery that action traces indicate the happening of those actions.

This view has the favourable outcome of granting three important points for an enactivist account of language:

- 1) It shows that utilitarian and symbolic behavior are both chapters of the same cognitive technology trajectory;
- 2) It doesn't require one to assume that symbol-making is the late externalization of a previously existing inner symbolic thought, because symbolic thought and symbol-making are the co-constructive outcome of the development of shared performative practices and habits;
- 3) It is fully compatible with the neurobiological characterization of human relational

potentialities as instantiated by embodied simulation. It is proposed that through the repetition, combination and memorization of particular shared behaviors and actions, and their mimetic ritualization, the social group infuses new cultural meanings into reused bodily performances. (Gallese, 2020, p. 11)

Our questions are, then, in what cases do actions become signs? And the answer is: when one can derive the next action from the previous one, based on shared habitual practices which are directly detected. And in what cases do signs endure? When shared habitual practices are materially engraved and culturally inherited by means of marks that become signs due to those very shared practices.¹⁶

Our reader may be thinking: but what is, then, the Stable Meaning of a Sign (SMS)? As we will suggest in our concluding remarks, we could conceive it as a constructive organizing activity (a fourth level similarity finding).

4. Concluding remarks

Based on the points we have raised in the previous sections, namely, that SMS doesn't have to be an internal mental representation and that symbolic practices emerged from material engagement, we will suggest in this section that SMS can be understood as a *construction*, and that, under this

¹⁶ "...as a result of [material symbols'] endurance beyond the context of production, we can understand the transformation through time in the meaning of material symbols not as a secondary effect, but as an inherent part of their dynamic and historical character... it is actions, past and present, that constitute... symbols [as such]" (Di Paolo et al., 2018, 297).

reading, Duffley's proposal on *Linguistic Meaning meets Linguistic Form* is compatible with a linguistic enactivist perspective on language and meaning. This compatibility rests on the conception of signs as objectified relations which take the form of "the metastable outcome of a history of encounters between participatory practices and materiality". (Di Paolo, et al. 2018, p. 64) "Speaking in dynamical terms, symbols act as metastable emergent constraints [states] that modulate the processes of social interaction and mutually interlock with other symbols" (*Ibid*, p. 295). In this perspective, construction can be conceived as an emergent process of agents relating to metastable states. What is the big difference between the mental content view and our proposal? We stop seeing the SMSs as the very foundation of things and start seeing them as a very abstract form of organization. As if we are drawing a grid, or a net, (our way of organizing) over what we live (our linguistic (verbal) experiences/practices).

How can this constructive organizing activity be explained? In the same fashion as the two points made by Gallese and Malafouris on the emergence of symbolic practices from material engagement. As we see material similarities of action traces left by common practices and derive from them the meaning of those traces, and as we identify that some marks are left purposefully/intentionally (we need to share the same practices to identify the meanings of those intentional marks), and as we agree on the same way of marking, we also identify similarities in our agreements, by means of shared practices.¹⁷ Let us say this is a "fourth

¹⁷ It is important to take into account the different timescales in which these practices occur and how they allow for the institution/emergence of meaning depending on many factors: the subjects, their histories of interactions and couplings, the very marks/signs, and also the timescales in which the interactions occur. Note also that an interaction can be distant in time by means

level” similarity finding, if we take mirroring actions to be the first, identifying action traces to be the second, and the marking to be the third. We call it *construction*, in the sense that we organize the material in front of us (the sedimented normative practices) and raise a building, let us say: “language as a symbolic system”. This constructive practice of finding similarities in our agreements regarding mark/sign uses presupposes that these agreements are marked, i.e., objectified and registered on the basis of the common practices that afford these markings. For example, the activity of pressing a cone token on clay (third level) is acknowledged to be similar to the activity of pressing a round token on clay, and so forth. This activity is, then, objectified as ‘marking’ (supposedly) (still third level). ‘Marking’ becomes a tool and is used in several similar contexts (which are not necessarily similar by the same aspects - as Wittgenstein’s family resemblance idea), then, we have the many ways in which one can use the word, and we can also find the similarities among them, which allow us to talk about a stable meaning of a word (the fourth level), which can acquire different nuances over time as a function of how it is used in many different contexts. Let us retrieve the example of our first paragraph: in objectifying a socially meaningful act and marking it with the word ‘micro-dilemma’ we are making this sign a tool. It can be used in several situations and acquire a variety of meanings depending on several factors of the situation, of the history and intentions of each of the participants in that interaction, of family resemblances with the use we made here, etc. One

of the signs. In these cases, the reader’s interaction is twofold, he interacts with the very sign and also with the distant (and sometimes unknown) author (or authors), and “as the spacial, historical and cultural distances between sense-makers grow, their [the signs] meanings shift” (Di Paolo, et al., 2018)

can, for example, use it for mocking another person who spends too much time struggling over a dilemma of little relevance. That is one of the reasons why it is important to consider corpora to investigate the uses of signs in order to find similarities and differences¹⁸ among them. In grouping those different uses under the same set of features, we are not only commenting on target phenomena, but organizing our practices. Such organizing activity allows linguists to identify general parameters - the SMSs - that language usage both creates and exploits.

We believe this approach avoids forcing “naturally occurring data of English into pre-conceived molds” (Duffley, 2020, p. 87), by acknowledging that the very activity of similarity finding (identifying general parameters) is a precondition of any organizing activity. We agree with Duffley that when investigating the workings of language, “one cannot assume prior knowledge of the semantics, as the latter is not directly observable and constitutes the very thing one is seeking to discover by examining the capacity of the linguistic sign under study to evoke certain messages in its uses in various contexts.” (Duffley, 2020, p. 87)

The only difference is that in an enactive perspective, studying language is first a reflexive languaging practice. One does not aim to discover the workings of language as an autonomous entity, but to seek a new level of relation to the open totality of symbolizing social agencies that enframes human sense-making activity. One works at identifying patterns in objectified shared practices, and this activity is itself the constructive activity of finding similarities; it is a patterning. Rather than locating the stable meaning of a sign in an isolated psyche that generates or stores content, then, we simply attend to bodily produced-and-received signs as

¹⁸ Differences or contrasts are the counterpart of similarities. They are mutually defined.

they are put into practice by articulating, expressing, and purposefully acting bodies, the same bodies that mail letters, want to play hockey, run screaming down the street, and debate classifiers. “The materials from which speech is made—expressive bodily activities—take form through the regular ways of acting of the members of the linguistic community. The expressive possibilities available to speakers of a language—what Merleau-Ponty called “spoken speech”—are sustained by the regular, habitual patterns of talking” (Kiverstein and Rietveld 2021, S186). So indeed, it is exactly in investigating real instances of talking as collected in corpora that the connection between linguistic meaning and linguistic form is revealed. “The level on which meaning is stably embodied” (Duffley 2020, 199) then, is the level of shared bodily practice. If we want to talk about a place “where a linguistic sign is stored in a stable, permanent, and direct relation with its meaning” (ibid), we can point to communities of language users, their continuous enactment of languaging forms of life, and the evolved human practice of detecting-selecting-constructing differences and similarities at different levels.

Thus, one can infer that, in sign-based semantics—although this is not explicit in Duffley’s book—the way in which pragmatics will adequately play its role in our explanations of meaning in natural language is mostly by means of the methodological processes we engage in for investigating language. In other words, if one begins with a premise that there is a divide between semantics and pragmatics, then using corpora databases is one concrete way to fold pragmatic information into the account of stable sign meanings. This is, after all, the methodological view explicitly presented in the book, namely, that it is possible to arrive at the stable meaning of a sign by investigating its uses in corpora databases, i.e., without postulating it based on a smaller number of cases or definitions. It is also compatible

with the idea that the stable meanings of signs that we arrive at by investigating their uses in corpora databases are constructs of a similarity finding practice, which is explained in terms of the four levels of identifying similarities, starting from our basic capacity of mirroring, and getting gradually more complex up to our practices of defining stable meanings. We hope that by presenting our view of what gives signs the meanings they have, we have contributed to the reflections proposed in *Linguistic Meaning meets Linguistic Form*.

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