Actual and non-actual motion: why experientialist semantics needs phenomenology (and vice versa)

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Abstract Experientialist semantics has contributed to a broader notion of linguistic meaning by emphasizing notions such as construal, perspective, metaphor, and embodiment, but has suffered from an individualist concept of meaning and has conflated experiential motivations with conventional semantics. We argue that these problems can be redressed by methods and concepts from phenomenology, on the basis of a case study of sentences of non-actual motion such as "The mountain range goes all the way from Mexico to Canada." Through a phenomenological reanalysis of proposals of Talmy, Langacker, and Matlock, we show that non-actual motion is both experientially and linguistically non-unitary. At least three different features of human consciousness—enactive perception, visual scanning, and imagination—constitute experiential motivations for non-actual motion sentences, and each of these could be related to phenomenological analyses of human intentionality. The second problem is addressed by proposing that the experiential motivations of non-actual motion sentences can be viewed as sedimented through "passive" processes of acquisition and social transmission and that this implies an interactive loop between experience and language, yielding losses in terms of original experience, but gains in terms of communal signification. Something that is underestimated by phenomenology is that what is sedimented are not only intentional objects such as states of affairs, but aspects of how they are given, i.e., the original, temporal, bodily experiences themselves. Since cognitive semantics has emphasized such aspects of meaning, we suggest that phenomenology can itself benefit from experientialist semantics, especially when it turns its focus from prepredicative to predicative, linguistic intentionality.

Keywords Cognitive semantics · Fictive motion · Grounding · Language–consciousness interactionism · Mental simulation · Phenomenology · Sedimentation · Subjective motion

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Introduction

A number of researchers in cognitive linguistics and cognitive science have, for some time, emphasized the "embodiment" or "grounding" of linguistic meaning through processes of cognition and sense making that are prior to and independent of language (Johnson 1987; Lakoff 1987; Langacker 1987; Zlatev 1997; Barsalou 1999a, b, 2008; Zwaan et al. 2004; Bergen et al. 2007). The main question concerns whether, and if so, to what extent, the meaning of conventional lexical and grammatical expressions is shaped by and relates back to an embodied subject with particular sensorimotor abilities. In addressing this question, semantic phenomena that might earlier have been set aside as "merely" metaphoric, idiomatic, or paralinguistic often occupy central place. One recurrent and indicative phenomenon, which might at first glance appear peripheral, is the use of sentences with motion semantics denoting states of affairs that, at least on the face of it, lack motion, e.g. (1a) and (1b), originally offered by Talmy (2000, p. 104):

1. (a) The mountain range goes all the way from Canada to Mexico.
    (b) The mountain range goes all the way from Mexico to Canada.

Terms such as *fictive motion* (Talmy 2000) and *subjective motion* (Langacker 1987; Matsumoto 1996), with quite different implications (see "Does 'mental simulation' explain non-actual motion?"), have been used to denote this apparently widespread, and possibly even universal, linguistic phenomenon. It has been argued that such expressions have a close experiential link to actual motion and that an implicit, "subjective" or "fictive" experience of motion is part of their meaning. Indeed, while (1a) and (1b) represent the same state of affairs, i.e., the spatial extension of a certain mountain range, they are clearly not synonymous. The semantic difference has been said to be derivative of the experience of two distinct mental acts of fleeting motion in opposite directions (Talmy 2000, p. 104; Matlock 2004b, p. 1390). An experience of motion not "actually there" is, so to say, superimposed on a static (i.e., motionless) situation. The experientialist argument is that a purely extensional semantics is incapable of capturing this, and hence, linguistic meaning should include aspects of non-linguistic cognitive processes of perception and imagination (Langacker 1987; Talmy 2000; Matlock 2004b; Brandt 2009). As claimed by Matlock (2004a, p. 1390): "…language is structured the way it is because of *our natural ability to simulate motion*" (our emphasis).

The goals of the present article are the following. First, we argue that a general explanation of the use of such sentences in terms of mental/cognitive/embodied "simulation" is inadequate. While the notion of "mental simulation" may appear to offer a simple explanation, we will argue that such simplicity in explanation easily leads to *over*-simplification, of both experience and language. Secondly, while agreeing with the general spirit of experientialist semantics and some aspects of the analyses of researchers such as Talmy, Langacker, and Matlock, we argue that neither of these analyses is *sufficient* to explain the phenomenon. Third, and most positively, we propose that the enterprise of grounding language in experience would benefit by being "grounded" in a broader phenomenological framework. We will do so by means of a constructive critique of the most well-known analyses of "fictive motion" in the literature, pointing out shared themes between the cognitive-linguistic and

phenomenological traditions. This leads to our fourth and most general goal: to contribute to the ongoing cross-fertilization between cognitive linguistics and phenomenology (e.g., Bundgaard 2010; Zlatev 2010).

To underscore the fact that our analysis differs from previous ones, and to avoid dichotomies such as "subjective/objective" or "fictive/factive," we will use the more neutral term *non-actual motion* to refer to certain dynamic qualities of intentional acts that can be seen as motivating the use of sentences with motion semantics to denote static situations. *Actual* motion from an observer's rather than a performer's perspective (cf. Zlatev et al. 2012) can be characterized phenomenologically as "the experience of continuous change in relative position of an object against a background" (Zlatev et al. 2010, p. 394). Thus, when we speak of *non-actual motion sentences*, we use this as a cover term for all sentences in which (minimally) a motion verb (e.g., *go*, *run*, *crawl*, *follow*) is used to denote a situation that lacks such observed motion. In some aspects of our critique of standard cognitive linguistic analyses of the phenomenon, we are in agreement with Brandt (2009), though we make exception to her endorsement of the notion of "mental simulation."[1]

In "Does 'mental simulation' explain non-actual motion?," we open the discussion by showing a terminological and theoretical conflict between key analyses of non-actual motion. We point to how this conflict is usually masked by appealing to "mental simulation" as the cover explanation. This psychological construct introduces a reductionist bias with the risk of confusing experience with putative "underlying mechanisms" and glosses over important experiential differences. This is the most critical part of our discussion. Then, in "Three complementary motivations for non-actual motion sentences," we reinterpret prior analyses of non-actual motion in cognitive semantics from a phenomenological viewpoint. We observe that the point of departure in nearly all cases, even when inspired by phenomenology (Brandt 2009), has been language, and above all, English. By departing from an analysis of experience, with a basis in Husserl's analysis of intentionality and its (genetic-phenomenological) preconditions rather than language, we show several different possible motivations for the use of sentences such as (1a) and (1b). Therefore, we propose that the linguistic phenomenon of non-actual motion sentences is experientially *non-unitary*. This has been noted before: "In some cases it is the movement of the focus of attention; in other cases the motion of some imaginary entity is involved; and in still other cases the mover is a specific person (e.g. a speaker or a hearer)" (Matsumoto 1996, p. 137), but without elaborating its implications. In "The interaction between experience and language," we argue that this non-unitary, differentially motivated character of non-actual motion sentences requires us to distinguish between conventional linguistic semantics and experiential motivations. In other words, the meaning of non-actual motion sentences is not fully reducible to prelinguistic experience. Instead, it testifies to a position that we have referred to in previous work as "consciousness-language interactionism" (Zlatev et al. 2012), according to which there is a reciprocal relation between prelinguistic experience and linguistic meaning—a reciprocity that also influences and quite possibly alters experience as

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[1] cf. "I have suggested the notion of "mental simulation," much in line with Langacker's description of the activity in question as a "building up to" a conception of a situation" (Brandt 2009, p. 576)

well. In this regard, we draw from Husserl's notion of *sedimentation* (Husserl 1970b; Woelert 2011). We conclude by summing up the ways in which a phenomenological framework is needed for providing an adequate account of non-actual motion sentences in particular and for experientialist semantics more generally. But we also suggest that phenomenology can benefit from cognitive-linguistic analyses that have emphasized that linguistic meaning does not only denote "objective" states of affairs.

Does "mental simulation" explain non-actual motion?

As pointed out in "Introduction," a number of different terms have been used to refer to non-actual motion, most often without clearly distinguishing between the linguistic phenomenon of using non-actual motion sentences and its experiential underpinnings. For example, Talmy (1983) wrote that examples such as (1a) and (1b) display *virtual motion*. Eventually, he subsumed these into a more general category of *fictive motion* (Talmy 2000) (see below). Other cognitive linguists have preferred the term *subjective motion* (Langacker 1987; Matsumoto 1996; Brandt 2009). In cognitive psychology, related notions of *implied motion* (Barsalou 2009) and *abstract motion* (Matlock 2010) are used to refer to either anticipations or "simulations" of motion on the basis of static configurations. Sometimes different authors use the same term, but with different senses, applying it to sentences that involve different kind of non-actuality. For example, Matlock (2010) claims that (2a) displays "abstract motion," while Langacker (1987) reserves this latter term for sentences like (2b) that are more clearly metaphorical, i.e., involve mappings over different "conceptual domains." According to Langacker, (2a) and (2c) rather express "subjective motion," united by the movement of the speaker's focus of attention along a visual/mental trajectory (cf. "Non-actual motion in the noetic act"). Example (2d) involves an understanding of perspective, but not such scanning.

2. (a) The highway crawls through the city (Matlock 2004a, p. 232)
    (b) The milk is about to go sour (Langacker 1990, p. 155)
    (c) An ugly scar extends from his elbow to his wrist (Langacker 2001, p. 9)
    (d) The enemy can see us from where they are positioned (Talmy 2000, p. 115)

On the other hand, Talmy (2000) regards all sentences such as those in (1) and (2) as expressions of "fictive motion," making distinctions between "co-extension path" (2a, and presumably 2b and 2c) and "emanation" path (2d), appealing for their common source in "a cognitive bias for dynamism" (ibid, p. 101).

It thus appears that the terminological discrepancies are not coincidental, but a result of different intuitions and theoretical interpretations, as we attempt to show in "Three complementary motivations for non-actual motion sentences." Such differences, however, are masked by explanations in terms of "mental simulation." The latter notion, defined by Barsalou (2008, p. 618) as "the re-enactment of perceptual, motor and introspective states acquired during experience with the world, body and mind," has gained considerable popularity in cognitive science on the basis of findings supporting the view that "mental processes are supported by *the same processes* that are used for physical interactions, that is, for perception and action"

(Pecher and Zwaan 2005, p. 1; our emphasis). Thus, it has been suggested that understanding and producing sentences such as (1) and (2) involves "the same processes" as when visually perceiving and/or performing an act of motion. As stated explicitly by (Matlock 2004b, p. 1390), in using such sentences "the conceptualizer (speaker or listener) takes a perspective in the scene and mentally simulates 'movement' or 'visual scanning' along the figure."

But what are the empirical bases for such a claim? Above all, experiments such as those described by Matlock (2004a, b), where participants judge the relevance of various non-actual/fictive motion sentences as continuations of simple stories about roads and paths through mountains and plains. In these studies, it was shown that if the story involves slow travel and difficult terrain, then reaction times are significantly longer than for stories involving fast travel and easily traversable terrain. These differences were claimed to show that non-actual motion sentences elicit mental simulation of motion, or as stated by Richardson and Matlock (2007, p. 238), where eye-tracking data was additionally adduced as evidence:

> The overall results suggest that in understanding an FM [fictive motion]-sentence, people re-activate and simulate aspects of the protagonist's motion, including speed, distance, and the terrain across which the movement occurred. In doing so, they construct a dynamic representation that *mirrors the actual motion of the protagonist*. (our emphasis)

There are, we believe, at least three problems with such an explanation. First, it is not made clear what is actually "simulated" when understanding a sentence such as (2a). In principle, it could be any one of the following four cases:

i.   The subject's imagined motion through the desert along a highway
ii. The subject's imagined motion of some external object, such as a car, along a highway
iii. The motion of something animate such as a snake, which resembles a highway
iv. The viewpoint of someone who is (merely) visually "scanning" a highway.

The quote by Richardson and Matlock (2007) given above is ambiguous depending on what is meant by "protagonist," and the one by Matlock (2004b) given earlier explicitly includes "visual scanning" as a possible object of simulation. While we agree that (1–4) correspond to experiences, more or less closely related to actual motion, they are in fact quite distinct. Instead of conflating them through a notion such as "mental simulation," they should rather be differentiated, and considered as possible *motivations* for using non-actual motion sentences. This argument will be elaborated in "Three complementary motivations for non-actual motion sentences."

A second problem lies in the claim (more often: assumption) that to understand non-actual motion sentences, some kind of implicit, fleeting motion, needs to be "simulated." But how do we, on this account, distinguish between examples (3a) and (3b)?

3. (a)   The man goes through the forest.
    (b)   The road goes through the forest.

After all, a general "simulation semantics" (e.g., Bergen et al. 2007) would state that even to understand a sentence such as (3a), describing an event of actual motion,

the motion of "the protagonist" (the man) would need to be imagined. A possible reply would be that in the case of (3a), the simulation of motion is more *vivid* than in (3b), since the first corresponds to actual, and the second to non-actual motion. In fact, such a strategy is reminiscent of Hume's classical differentiation between ideas and impressions as differing in vividness, or "liveliness" (Hume 1748). Even if we were to accept the claims that "mental simulation" should not be confused with classical empiricism, since it occurs on a "sub-personal level" (Barsalou 1999a, b), one would need to account for the qualitative semantic difference between (3a), in which actual motion is linguistically represented, from (3b), where this is not the case. The semantic difference between (3a) and (3b) can possibly be attributed to the different kind of "protagonists" (car vs. road). But then, consider the examples in (4), in which the speaker reports (or imagines): (a) performing an act of motion (or translocation) in (4a), (b) observing such an act in (4b), or (c) viewing a static situation, but through a temporally extended act of observation, as in (4c). If these examples all involve "mental simulation of motion" then why are their semantic differences so obvious? The simulationist explanation thus obscures not only differences between different motivations for non-actual motion, as suggested above, but also the difference between the experiences (and the semantics of the linguistic descriptions) of actual and non-actual motion.

4. (a) I am driving over the bridge.
   (b) I am looking at the car moving over the bridge.
   (c) I am scanning the length of the bridge.

The third and perhaps most damaging problem is the convenient ambiguity in the notion of "mental simulation" itself: does it occur on the "personal" level of imagination, or on the "sub-personal" of unconscious brain processes? This ambiguity is *convenient* because critiques such as those offered above are often met by proponents of simulation semantics by stating that we do not have "direct access," i.e., we are not consciously aware of the simulation processes that are going on in our brains (Barsalou 2009). Perhaps some future, more precise brain-imaging experiment could find "neural correlates" to the distinctions (i)–(iv) in the first objection, or to the kinds of simulations in (3) and (4), in the second objection. In the meantime, can we not just lean back and enjoy the (simulation) show? We cannot. These distinctions are easily made by all speakers of English, since they correspond to natural distinctions in their lived experience—that is, through methods that are either explicitly or implicitly phenomenological. While we could eventually "go neurophenomenological" and look for third-person correlates of these different experiences, we cannot even begin to make sense of the data from neuroimaging studies without first individuating these experiences on a conscious level. In other words, we cannot account for what is present in experience through what is invisible to experience. Gallagher (2008) makes the analogous point concerning explanations of empathy in terms of a sub-personal "simulation theory."

There is a further intriguing parallel between explanations of empathy and non-actual motion: Both "theory theory" and "simulation theory" accounts of empathy (or "mentalizing") gain their initial plausibility on the basis of attested experiences (and

experiments) in which people either reason about or imagine the thoughts of others (Gallagher 2008, 2012). In the next step, however, this is pushed back to the "sub-personal" level. In the experiments of Matlock (2004a, b), briefly summarized above, participants were explicitly asked to *imagine* (thereby living-through, perhaps even "empathizing" with) the protagonist's acts of travel described in the contexts of the stories, i.e., the deserts, plains, hills etc. and the manners of motion across them—before judging the relevance of either "fast" or "slow" non-actual motion sentences. Thus, conscious imagination of motion may very well have been involved in producing the found differences in reaction times. We return to this in "Non-actual motion in imagination."

To conclude this critical section, we should make it clear that our objections against "mental simulation" as the cover explanation for the use of non-actual motion sentences should not be seen as skepticism about the value of psychological experimentation. Indeed, we believe that this may be the only way to find out how people understand and use non-actual motion sentences under particular circumstances, and we are currently carrying out such experiments ourselves (Blomberg and Zlatev 2012). But such "how" questions presuppose, logically and phenomenologically "what" and "why" questions: *what* is the nature of the phenomenon of non-actual motion, and (relatedly), *why* do such sentences occur across languages, albeit under constraints typical for the respective languages? It is to these latter questions that we now turn, by examining the theoretical background of the most prominent analyses in cognitive semantics.

Three complementary motivations for non-actual motion sentences

To remind, Talmy (2000) adopts the term "fictive motion," Langacker (1987, 1991, 2006) that of "subjective motion," and Matlock, at least in one text (Matlock 2010) refers to "abstract motion." While on the surface the three terms may seem to be synonymous and the three authors in agreement, we argue in this section that this is not the case. In particular, these differences become clear once we disavow ourselves of the (leaking) umbrella of "mental simulation," as proposed in the previous section. While Talmy, Langacker, and Matlock may not be fully aware of this, their respective concepts correspond to *three conceptually and experientially distinct motivations*, profiling different dynamic aspects of intentionality. We substantiate this claim by (re)interpreting their analyses with the help of explicit phenomenological concepts. Since all three motivations may at least potentially play a role for the production and comprehension of non-actual motion sentences, an explanation of the latter would need to be as a "hybrid," or non-unitary phenomenon. Or at least this will be our argument in this section. In the "The interaction between experience and language," we will adduce further evidence for this conclusion.

Non-actual motion in perception

In his analysis of "fictive motion," Talmy (2000) initially states that "a pure demonstration…would exclude reference to an entity that supports the actual motion of other objects (as a road guides vehicles) or that itself may be associated with a history

of actual motion" (Talmy 2000, p. 104). In other words, Talmy argues that sentences expressing non-actual motion should not be considered *metonymic* or associative, e.g., in (2a) the highway stands for movement along it, due to the fact that the meaning of 'highway' may be associated with "a history of actual motion." What does Talmy's "pure demonstration" amount to?

To begin with, Talmy observes that for many non-actual motion sentences such as (1) or (2c), a metonymy explanation would not suffice, since the denoted "figure" (e.g., a mountain range) is not associated with motion. In general, Talmy considers sentences of non-actual ("fictive") motion as *non-veridical*. Mountain ranges do not move, but still we say so as in (1). Talmy attempts to explain this wide-spread linguistic tendency by appealing to a dynamicity common to visual perception, cognition, and language. Talmy's argumentation is mostly carried by linguistic examples, but in one case, he urges us to consider a strongly tilted painting: Is it easier to perceive it as a static object with, say, the shape of a rhomb or to perceive it as an object calling for correction (ibid, p. 172)? Both are possible but mutually exclusive and it is easy to agree with Talmy that visual perception would normally privilege the latter.

Furthermore, Talmy considers the two perceptions to be not just mutually exclusive but of different nature. The discrepancy between these two ways of attending is attributed to the distinction between a *fictive* and a *factive* mode of cognition. The former is more perceptually salient, but less veridical. The latter is less perceptually salient but more veridical. In other words, to attend to the painting in the "fictive" mode requires perceptual veridicality to be overridden. To explain the preference for the fictive mode, Talmy proposes a "cognitive bias towards dynamism" in both language and cognition in general:

> The cognitive bias toward dynamism in language shows up not only in the fact that stationary phenomena are fictively represented in terms of motion more than the reverse. In addition, stationary phenomena considered by themselves can in some cases be represented fictively in terms of motion even more than factively in terms of stationariness. […] factively static phenomena in cognitive systems other than language may also be more readily cognized in fictively dynamic terms than in static terms. (Talmy 2000, pp. 171, 172)

Whatever is given in perception is cognitively overridden due to a preference for dynamism. Thus, Talmy traces the motivation for sentences of non-actual motion in the "fictive" nature of linguistic, perceptual and conceptual meaning, or *ception*.[2] We attend primarily to change, to that which differs and to that which we can affect. The static and unchangeable is less palpable. Is it then warranted to speak of this dominant, dynamic mode as "fictive"? It is counter-intuitive to attempt to ground (linguistic) meaning in a mode or attitude that is in conflict with what we believe to be the case, i.e., veridical. If cognition is biased towards the fictive, then how can we ever obtain knowledge that is "factive"? For example, how is it even possible to assess roads as immobile? Brandt (2009) raises a similar argument against Talmy's fictive/factive distinction by suggesting that with it Talmy inadvertently slips into the

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[2] Talmy (2000) proposes the neologism "ception" to refer to the common denominator, as it were, of perception and conception. To our knowledge, it has not received wide acceptance.

old ontological distinction between "mind-dependent" and "mind-independent" reality, which is something that cognitive semantics attempts ardently to avoid (e.g., Lakoff 1987) and remarks:

> Since the dynamic process of imagistic motion does not correspond to anything outside itself, it seems misleading to apply the notion of fictivity, implying, as it does, that something is conceptualized as not real. (Brandt 2009, p. 579)

The inconsistency between Talmy's appeal to a "cognitive bias towards dynamism" and his "fictive" analysis of non-actual motion sentences can be overcome with the help of a phenomenological analysis. In particular, we would propose that the distinction in question should not be seen as an ontological distinction but rather as that between two modes of givenness that need *not* be mutually exclusive, or even in conflict with one another. Talmy's "fictive mode" corresponds to a prereflective and engaged mode of experiencing. The tilted painting is not only, or even primarily, an object of a certain shape, but rather a representational artifact normally perceived at a certain angle, and when this is not the case, the tilted painting itself, as it were, calls for correction. In addition to this "enactive" or "engaged" mode of perception, there is also a reflective and more distanced mode, according to which the painting may be perceptually intended as having a certain shape.

What is the connection between an engaged mode of perception and motion? Everyday encounters have a certain dynamic and temporal character. Consider the simple case of getting a better look at a partially occluded object: It becomes more visible by tilting your head, adjusting your posture or moving to another vantage point; through these *bodily* actions, the object gives itself from other angles. In other words, this reading of Talmy's "bias towards dynamism" is fully compatible with Husserl's analysis of the capacity for self-motion as a central precondition for perceptual intentionality (e.g., Husserl 1973; Overgaard 2012).

To return to the example of the tilted painting: A mere tilt of the head changes the angle of your focal perception of it. The painting is now given as another appearance, against a background of different possible appearances, or "aspects" (Sokolowski 2000, p. 19). Thus, the immediately given appearance depends on your bodily position, though you still perceive the object in its entirety as a three-dimensional object. How can it be that objects are always perspectively perceived yet given as wholes in space and time? To resolve this paradox of perception, Husserl appealed to the notion of *kinestheses* according to which perception is effectuated by the correlation to possible bodily movements.

> Every perception which presents the object to me […] leaves open the practical transition to other appearances of the same object, specifically to a group of appearances. […] There is thus a freedom to run through the appearances in such a way that I move my head, alter the position of my body, go around the object, direct my regard toward it, and so on. We call these movements, which belong to the essence of perception and serve to bring the object of perception to givenness from all sides insofar as possible, *kinaestheses*. (Husserl 1973, pp. 83–84)

Kinaestheses belongs, Husserl argues, to "the essence of perception" (ibid, p. 84). Every act of perception necessitates that *another* appearance is always possible. The phenomenological riddle of objects being perceived through series of perspectival

appearances and at the same time in their entirety (as transcendent) can be resolved by appeal to the freedom of motility in the sense of possible movements through space (Overgaard 2012). These movements are embedded in a "kinaestethic horizon" as an endless continuity of possible vantage points. The incompleteness of every singular perception is therefore complemented by the possibility for another appearance, from another point of view, *which may also be that of another subject*. Thus, the perception of a stable, three-dimensional world is made possible not only by self-motility, but by "transcendental intersubjectivity," as emphasized by Zahavi (2003, p. 115): "Husserl's thesis is that my experience of objective validity is made possible by my experience of the transcendence […] of foreign subjectivity." Another aspect (or level) of intersubjectivity essential for the constitution of the objective world is the experience of the other experiencing myself, in which "I take over the Other's objectifying apprehension of myself, in which my self-apprehension is mediated by the Other" (Zahavi 2003, p. 117).

In the light of these phenomenological considerations, we may reconsider examples (3b) and (2d) discussed in the previous section, given again as (5) and (6) respectively, along with additional examples of the same type.

5.　(a)　The road goes through the forest. (=3b)
　　(b)　The path leads to the top of the mountain.
　　(c)　The picture is leaning to the left.

6.　(a)　The enemy can see us from where they are positioned. (=2d)
　　(b)　She can see you from her window.
　　(c)　I must look tall to her.

The meaning/use of examples in (5) can all be seen as (potentially) motivated by the kinesthetic and enactive nature of perception. As shown, a phenomenological consequence of kinesthetic effectuation is that perception itself is dynamic, not only in the sense of a process unfolding together with motility, but also that perceptual objects give themselves in the dynamic flow of space. The subject is always related to the environment in a dynamic and kinesthetic mode. In other words, we *perceive* a road or a path as features of the environment that *afford* movement (through a forest, or to a summit); we perceive a lopsided painting as "leaning," and thus calling on us to set it straight.

However, such an analysis is not sufficient to account for the examples in (6), which strictly speaking are not related to experiences of non-actual motion (*pace* Talmy), but to the experience of the perspective of the Other, or in Zahavi's words quoted above, to "the Other's objectifying apprehension of myself." The use of the preposition "from" in (6a) and (6b) does not signify motion, but only a vantage point, similar to the use of "to" in (6c) (cf. Zlatev 2007). The difference in the two cases (6a and 6b vs. 6c) lies in the way the perceptual encounter has been framed: from the perspective of the perceiver/observer in the first case, and from the perceptive of the perceived object (here, the objectified self) in the latter. Still, these examples conform to the dynamic nature of perception and to the directedness of intentionality.

In sum, many of the linguistic examples analyzed by Talmy as "fictive motion" can rather be seen as motivated by the dynamic conditions for perceptual intentionality: either those involving affordances for motion as in (5) or those reflecting

intentional directedness as in (6). It is only the former that are motivated by experiences of non-actual motion. However, our initial examples in (1), and other similar ones which lead Talmy to reject a metonymy explanation, do not fall in either category. After all, a mountain range or a scar neither "afford" motion nor require an awareness of alternative vantage points. Another explanation, or experiential motivation, is here necessary. As we show below, the basis for this can be found in the work of Langacker.

Non-actual motion in the noetic act

The essential difference between actual and non-actual motion is according to Langacker that the first involves *objective* and the second *subjective construal*. Hence, it is only consistent with his analysis that he refers to sentences such (1), in which the grammatical subject denotes something (like a mountain) that does *not* afford motion, as well as examples such as (5a), in which the subject denotes something (like a road) that does so, as "subjective motion." It is important not to misunderstand Langacker's notion of subjectivity as referring to "mind-dependence" or as "mental simulation." A concise explication of the distinction between objective and subjective construal is the following:

> An entity is said to be objectively construed, to the extent that it goes "onstage" as an explicit, focused object of conception….An entity is subjectively construed, to the extent that it remains "offstage" as an implicit unselfconscious subject of conception. At issue, then, is the inherent asymmetry between the conceptualizer and the conceptualized, between the tacit conceptualizing presence and the target of conceptualization. (Langacker 2006, p. 18)

Arguably, the distinction that Langacker wishes to make rests on the *correlational nature of intentionality*, a correlation between the subjective intentional act (*noesis*) and the (objective) intentional object (*noema*) (cf. Zlatev 2010). As can be seen from the quotation above, Langacker insists that there is a correlative structure between conceptualizer and conceptualized in every act of "conceptualization." As well known, Husserl has argued that both the ego- and the object-pole are indispensable to every intentional act (Husserl 1983; Moran 2005). On the one hand, there is an active process, expressed in English as the present participle form of the verb denoting an intentional act ("V-ing"), and on the other hand, an intentional object that is "V-ed": the ego is perceiving/wishing/imagining, while the object is perceived/wished/imagined. The intentional relation is dependent on *how* it is meant; it is a different relation depending on whether the intentional object is perceived, wished, imagined, etc. (see "Non-actual motion in imagination"). Similarly, Langacker's speaks of "the subjective pole" and "the objective pole" in any act of conceptualization, as well as in corresponding sentences.

When this distinction is applied to motion, the latter can be seen as either objectively construed as in (7a), or as subjectively construed as in (7b).

7 (a)   The balloon rises.
   (b)   The trail rises steeply near the summit.

In (7a), the verb *rise* represents the motion of the denoted object; the balloon is "an explicit focused object of conception" (cf. the quotation above), where the presence of the subject (the speaker) is implicit and completely "offstage." In (7b), conversely, the speaker's attention is also directed towards the meaning-act itself. In the first case, motion is a feature of the noema/intentional object, while in the latter, motion characterizes the noetic act. To put it bluntly, it is the balloon that rises in (7a), whereas it is the attention focus of the speaker that rises in (7b).

Langacker's proposal is that some crucial aspect of the meaning of the verb *rise* as used in (7a) must be maintained in (7b) for the latter construal to be comprehensible (when expressed in a sentence of English). In both cases, "the conceptualizer traces an analogous mental path" (Langacker 2006, p. 25), also called "mental scanning." The proposal is that *rise* has a subjective component, with an inherent dynamic and temporal character, which is retained and reused in (7b), while the onstage motion has been bleached. The result is that the meaning of *rise* in (7b) has undergone "subjectification." It should be noticed that this analysis could apply not only to cases such as (7b) where the grammatical subject again denotes something that affords motion but also to the examples in (1) and (2) that appeared troublesome for the analysis proposed in "Non-actual motion in perception," involving mountain ranges and scars. In sum, Langacker offers his notion of subjectification (which should not be confused with metaphor, understood as a cross-domain mapping, cf. "Does 'mental simulation' explain non-actual motion?") as a general explanation for the use of non-actual motion sentences.

Langacker's proposal is certainly general, but somewhat analogously to the case of "mental simulation," criticized in "Does 'mental simulation' explain non-actual motion sentences," one may have qualms that it is *too* general. For example, it also purports to account for the relation between expressions of deontic and epistemic modality, as in (8), where (8b) has, according to Langacker, also lost some of its "onstage" meaning present in (8b).

8. (a) You must come on time.
   (b) You must be wrong.

The proposal that certain linguistic expressions undergo a process of subjectification in historical time, in which their objective-pole correlate is "bleached," while their subjective, dynamic, noetic pole (such as "mental scanning") is retained, is certainly intriguing, and represents a possible alternative to more standard cognitive semantic analyses of such semantic change in terms of conceptual metaphor (e.g. Sweetser 1990). But it risks losing sight of what is specific about non-actual motion (sentences). If the notion of "mental scanning" is to apply to (7b) as well as to (8b), then its intuitive character, based on the concreteness of *visual* scanning, would be lost. If the difference between expressions of actual motion such as (7a) and non-actual motion such as (7b) lies only in the fact that the latter focuses only on the dynamic character of intend*ing*, while the former (also) on the object intend*ed*, then this can hardly be regarded as especially revealing of motion: actual or non-actual. The fact that intentionality has a correlational structure, and its subjective-pole is dynamic and occurs in a kind of "inner time consciousness" (corresponding to Langacker's notion of "processing time") is an overarching idea within Husserlian phenomenology (cf. Zahavi 2003), which means that it applies to all phenomena, for

example both motion and change. Langacker seems to take this consequence gladly: "it is not at all obvious that change and motion are ever strongly dissociated in our conceptual world" (Langacker 1990, p. 156).

For us, however, this is an undesirable consequence. Motion and change are separate phenomena in our experienced, intersubjective world, as are expressions of non-actual motion such as (1), (2a), and (2c) and sentences of "abstract motion" such as (2b), in which there is only metaphorical, as-if motion on the "objective pole." Here lies, we suggest, the problem with Langacker's analysis of non-actual motion: It seems to forget, or at least to strongly downplay *the object-pole of the intentional relation*. What remains is only the subjective part of "mental scanning." However, as we argued in "Non-actual motion in perception" on the basis of a phenomenological interpretation of Talmy's analysis, the connection between the experience of non-actual motion, and the sentences expressed by it, to actual "embodied" space as dynamically accessible is quite tangible, and thus one likely motivation for the use of such sentences. Thus, we suggest *per* Husserl and *pace* Langacker that the object-pole cannot be so easily neglected. This means that Langacker's explanation of non-actual motion sentences—because they involve "mental scanning" similar to the analogous cases of actual motion—can only be a partial motivation.

We could generalize and conclude that both Talmy and Langacker are in part correct, since they attribute non-actual motion to different aspects of the multifaceted process of intentionality. However, even combined, the two accounts are not sufficient, since intentionality is broader than this: It also involves imagination.

Non-actual motion in imagination

In "Does 'mental simulation' explain non-actual motion?," we objected to the notion of "mental simulation," commonly understood as "the *re-enactment* of perceptual, motor and introspective states acquired during experience with the world, body and mind" (Barsalou 2008, p. 618, our emphasis), for three reasons: (a) it glosses over complementary experiences on non-actual motion (and their role as motivations for non-actual motion sentences) such as those described in the previous two subsections; (b) it runs the risk of losing the distinction even between actual and non-actual motion, as expressed in the sentences in (3), repeated as (9) below; and (c) it is ambiguous between referring to "personal," conscious imagination, and "sub-personal" neural processes. To these we could add a fourth objection that can be seen as a special case of (a): even if taken as fully fledged personal, conscious mental imagery (as in Talmy's notion of "ception"), appeals to mental simulation commonly confuse two fundamentally different forms of intentionality: perception and imagination. Consider again the examples in (3), repeated as (9).

9. (a) The man goes through the forest. (=3a)
    (b) The road goes through the forest. (=3b)

Sentence (9a) can be uttered as a description either of a perceived event in which a man goes through a forest, or of an imagined event. Both the act of perception and that of imagination have the referent of "the man" as their intentional object, but differ in *how* he is intended, as mentioned in "Non-actual motion in the noetic act." Perception and imagination differ in two important ways: in perception the intentional

object is *presented*, while in imagination it is *re-presented* (as in memory or anticipation). In addition, imagination does not *posit* existence, which perception (as well as memory) does. Perception/presentation is thus the "intuitive mode of experience par excellence" (Gallagher and Zahavi 2008, p. 91). Imagination, or "mental imagery," is derivative: not in the same way that a picture of the perceived event is derivative, or a sentence such as (9a), both of which constitute mediated representations or signs (Sonesson 1989), but in a way that would truly deserve to be called a "re-enactment" of perception, as proposed by Thompson (2007a, b):

> In visual imaging or visualizing, we do not inspect a phenomenal mental picture; instead we mentally re-present an object by subjectively simulating or emulating a perceptual experience of that object.… [it is] the activity of mentally representing an object or scene by way of mentally enacting or entertaining a possible perceptual experience of that object or scene" (ibid, pp. 297, 279)

What about the sentence in (9b)? Clearly, it cannot be taken as a description of a perceived event of actual motion in the same way as (9a). Still, this does not imply that it must be seen as corresponding to an imagined event. Talmy's analysis of non-actual motion, we argued in "Non-actual motion in perception," gains credibility when seen through the lens of phenomenology as based on the enactive, kinesthetic nature of perception, rather than on fictivity. From this perspective, all that is required to produce (if the conventions of the language allow it, see below and "The interaction between experience and language") and comprehend the sentence as involving non-actual motion is to be sensitive to the fact that a road is a particular type of "cultural affordance" (Sonesson 2009) that invites, and is commonly used for actual motion. Furthermore, the use of sentence (9b) can be motivated by the temporal and directional act of scanning the extension of the road, an aspect of the noetic, subjective pole of the correlational structure of intentionality, as we showed in "Non-actual motion in the noetic act." While this would seem to generalize to all forms of intentionality, including both perception and imagination, given that Langacker's most convincing linguistic analyses of "subjectification" involve (visual) perception, and the fact that perception is the most "original" form of intentionality, we may assume that the non-actual motion experience implicit in Langacker's analysis is basically perceptual.

Does this mean that imagination cannot play a role as a motivation for non-actual motion sentences, that there is no imaginative non-actual motion experience? Not necessarily, since in addition to what has already been said, it is also possible that (9b) can be seen as a linguistic "compression" of (10). If this is indeed the case—and there may be considerable individual variation in the imaginative activities of speakers and hearers—then the sentence may indeed involve "embodied simulation," in the sense of conscious imagery, either with X being instantiated as the subject himself (imagination from the first-person perspective) or as some other actual, or virtual "mover" (imagination from a third-person perspective).

10.   The road is located in such a way that it allows X to move through the forest.

As may be recalled from "Does 'mental simulation' explain non-actual motion?," in the positive results from the experiments of Matlock (2004a, b), it took participants longer to "process" non-actual motion sentences with longer than shorter trajectories

of motion. This can be taken as evidence that at least *to some extent*, *in some contexts*, *by some subjects*, such imaginative processes indeed do take place. Thus, suitably curtailed, Matlock's "simulation" explanation can be said to be valid. Its main problem appears, as with those of Talmy and Langacker, when the explanation becomes overgeneralized. Then, it both transgresses its own boundaries (mixing imagination with perception) and loses the focus area where it does have (limited) plausibility.

There is a further type of non-actual motion sentences, which seems to call for an imagination-based explanation. These are those like in (11), where the verb of motion is *not* one of generic, "bleached" motion such as "go" and "run," but rather expresses a particular manner of movement, often typical for certain living creature.

11. (a) The highway crawls through the city. (=2a)
    (b) Insanity runs in my family….It practically *gallops*! (Cary Grant)
         (Brandt 2009, p. 573)
    (c) There is like this *snaking* road up over the hills. (Brandt 2009, p. 582)

    (d) Det   sammetsmörka   diket   krälar   vid min sida
         DEF   velvet-dark   ditch.DEF   creeps   by my side
         'The dark velvet ditch creeping by myside.'(T. Tranströmer, *April and Silence*)

In fact, it is only non-actual motion sentences such as these that deserve to be called metaphorical (and perhaps even "fictive"), since in all these cases it is neither (only) the focus of attention that is "moving," nor a matter of imagining the self or some other entity that is moving along the trajectory defined by the grammatical subject (semantically, the *figure*). Rather, the figure itself is presented "as-if" moving, through a personification, or rather "animalification" metaphor.

However, the use of such sentences is quite restricted. English is the only language of those systematically studied so far that allows the productive use of manner-of-motion verbs in non-actual motion sentences, and as (11b) and (11c) show, their contexts can be quite special, and even humorous. Japanese (Matsumoto 1996) and especially Yukatek Maya (Bohnemeyer 2010) do not allow such sentences, for linguistic-typological reasons (Blomberg and Zlatev 2011). In Swedish, they are also much more limited, with the rather bleached *löper* ("runs") as the most prominent example in colloquial speech. This is highlighted by the fact that (11d) is taken from a poem by the Swedish Nobel Laureate Tomas Tranströmer, and should be therefore regarded as paradigmatically "poetic."

Thus, to summarize, imagination can indeed be seen as a "layer" on top of the two experiences of non-actual motion discussed in the previous two sections, based essentially on perception. It is not an alternative to them and can rather be seen as a natural *elaboration* of some sentences of non-actual motion. In general, imagination can be regarded (metaphorically) as an "apex" of human consciousness, allowing unparalleled heights of intentionality and creativity. However, it is not the "ground" of meaning in general and, correspondingly, should not be regarded as the primary motivation for the use of non-actual motion sentences.

Summary

We have argued for (at least) *three independent types of non-actual motion experience*, corresponding to three different motivations for the use of non-actual motion sentences. Each one of these three types was found to be reflected in the analyses of three influential researchers concerned with the phenomenon: Talmy, Langacker, and Matlock, each one of whom has tended to overextend their analysis, at the expense of internal coherence.

Talmy's distinction between fictive and factive (motion) was found to be deficient, and we could interpret it more plausibly as the difference between two modes of givenness: an enactive engaged mode and a more reflective distanced one. Langacker seeks the motivation for non-actual motion sentences in their similarity with the visual perception of (observed) actual motion events. Non-actual motion retains the act of shifting attention, scanning through space in what Langacker calls "processing time," while bracketing or bleaching the intentional object. This was seen to have a clear parallel in Husserl's analysis of the correlational structure of intentionality, but with insufficient acknowledgment of the objective-pole, thereby rendering Langacker's analysis somewhat too "subjective." We argued further that the Talmy- and Langacker-based analyses should rather be seen as separate and complementary, rather than mutually exclusive.[3] Finally, we re-engaged with Matlock's analysis of non-actual motion in terms of "mental simulation," and despite our critical stance towards this concept, we could to some extent re-habilitate the intuitions behind it, in general and as a possible motivation for some linguistic expressions of non-actual motion. The requirement was, however, to interpret the notion with phenomenological care, distinguishing imagination from perception.

In conclusion, (1) enactive perception, (2) temporality and the subjective–objective correlation of intentionality, and (3) imagination are three essential and interconnected aspects of our experiential lives that individually or in combination can help explain why sentences expressing non-actual motion exist in many, and perhaps even all human languages. At the same time, as hinted in the previous sub-section, not all languages have equally extensive ranges of such sentences, a fact that reminds us to distinguish between experiential motivations and linguistic conventions. This is a theme that will be addressed in the following section. The main conclusion from the present discussion is that non-actual motion—both in experience and language—is as we stated in the introduction a *non-unitary phenomenon*, and should not be subsumed under cover-all notions of "ception," "subjectification," or "mental simulation." Which one of the three motivations is to be adduced as an explanation for non-actual motion sentences is very much an empirical question: They vary from sentence to sentence, and may as well vary between speakers and contexts of use. Still, as described in this section, and summarized in the onset of the following section, some types of sentences are more clearly linked to one kind of experience than another.

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[3] There are ways to tie these two aspects together by considering the role of the lived body and its connection to intersubjectivity in more detail—especially Husserl's notion of *double sensation* (cf. Zahavi 2003): as my right hand touches the left I am both touching and touched, experienc*ing* and experienc*ed*. This is for Husserl an important condition for the extension from subjective to intersubjective and thenceforth to public.

The interaction between experience and language

In the discussion so far, we made an effort to distinguish between non-actual motion *experiences* and non-actual motion *sentences*. The distinction between experience and meaning is often forgotten in the cognitive semantics literature, due to the assumption that there is a straightforward one-to-one mapping (even identity) from "conceptualization" to linguistic meaning. At least in the domain of non-actual motion, this is manifestly not the case, for the following three reasons.

The first reason was the theme of the previous section: non-actual motion sentences are linked to not one, but to at least three different kinds of non-linguistic experiences. In fact, each one of these three kinds seems to be especially adept for motivating a particular kind of non-actual motion sentence. For *enactive perception*, this is sentences with objects affording motion, and with general motion verbs such as (12a); for *scanning*, sentences with extended objects that do not afford motion as (12b); and for *imagination*, metaphorical sentences using motion verbs "creatively" such as (12c).

12. (a) The highway goes through the forest.
    (b) The wire goes through the forest.
    (c) The path snakes through the forest.

Hence, our conclusion was that non-actual motion is a non-unitary phenomenon both on the level of experience *and of language*. A possible objection is that the linguistic manifestations of these different experiences appear similar enough in (12) to suggest that at least linguistically we are dealing with the same phenomenon. And if so, a single explanation along the lines of "mental simulation" may be preferred on the basis of parsimony. However, this singularity is illusory. As mentioned earlier, English seems to be an exception in allowing (apparently) similar verbalizations of the situations in (12). Yukatek Maya allows only sentences such as (12a) (Bohnemeyer 2010). Japanese has sentences corresponding to (12a) and (12b) but, as shown by Matsumoto (1996), marks their difference. In (13a), corresponding to (12a), either the path verb *tooru* ("cross"), the deictic motion verb *iru* ("go"), or the compound path-deictic verb *too-te-iru* are possible, while in (13b), the latter two, which explicitly express motion cannot be used.

13. (a) Sono haiuee   wa   heeya no   mannaka   o

    the highway   TOP   plain GEN   center   ACC

    {tooru/iku/too-te-iku}

    cross/go/through-go

    'The highway {crosses/goes in/goes through} the centre of the plain.'

    (b) Sono   densen   wa   heeya no   mannaka   o

    the   wire   TOP   plain GEN   center   ACC

    {tooru/*iku/??too-te-iku}

    {cross/go/through-go}

    'The wire {crosses/goes in/goes through} the centre of the plain.'

English is exceptional in that it allows the greatest number of verbs expressing manner of motion such as *crawl*, *snake*, *gallop*, etc. in non-actual motion sentences such as (12c), but still, their use is highly context-specific. As shown in (14a), it is by no means possible to substitute the verb *run* with near synonyms in a non-actual motion sentence, while there is no such constraint in the case of corresponding sentence of actual motion (14b).

14. (a) The highway runs/?dashes/?scoots/?sprints across the desert.
     (b) Ronaldo runs/dashes/scoots/sprints across the field.

This brings us to the second reason to distinguish between (motivating) experiences and conventional semantics. The first may be argued to constitute a necessary condition for the use of non-actual motion sentences (else, they would not "make sense"), but not a sufficient condition since language-specific conventions determine (with some room for creative variation) which motivations become "entrenched" and which do not. It is possible to draw an analogy with another semantic domain: that of temporal reference which in many of the world's languages is based on spatial construal (or metaphor). For example, the days of the week can be represented as spatial landmarks either using a preposition expressing SURFACE as in English, or one expressing INTERIOR as in Russian, but not vice versa, as shown in (15). To put it bluntly, it is experience that proposes, but convention that disposes.

15. (a) I will see you on/*in Monday.

     (b) Uvidimsya *na/v ponedel'nik

          PERF.see.PL.REFL on/in Monday

Third, and finally, language use has its own motivating principles, one of which is economy (Croft 2003). While a metonymic association between motion along a path and its configuration is not sufficient to account for all kinds of non-actual sentences, as noted by Talmy (cf. "Non-actual motion in perception"), it is clearly much more economical to describe the spatial configuration of a motion-affording object as in (16a) than (16b), and very likely one of the major reasons for expression such as (16a) to become conventionalized in most languages.

16. (a) The road goes into the forest.
     (b) The road has a certain configuration with respect to the forest: the initial part (closest to us) is outside, the further part (away from us) is inside…

In sum, for these three reasons (multitude of motivating experiences, the "veto right" of convention, language-specific motivations such as economy), it is important to maintain the distinction between prelinguistic experience and linguistic meaning, and in our particular case, between non-actual motion experience and non-actual motion sentences. Still, this does not absolve us from asking: what is the relation between (motivating) experiences and conventional semantics? In an argument for the essentially social and normative nature of linguistic meaning, Itkonen (2008) refers to "fictive motion" as an example of "private," subjective experience, and suggests that it is irrelevant for (synchronic) language use and understanding:

> [T]wo opposite *fictive motions* are assumed to be connected with the sentences *That mountain range goes from Canada to Mexico* and *That mountain range goes from Mexico to Canada* […] But suppose that, upon hearing or uttering one or both of these sentences, I fail to mentally perform the typical fictive motion. What happens?—Nothing.—Why?—Because no norm has been broken.—Why?—Because a norm cannot be broken without people realizing that it has been broken. (Itkonen 2008, p. 23)

Thus, according to Itkonen, while non-actual motion sentences might very well be experientially motivated *historically*, these motivations *qua* "founding activity" of linguistic meaning are not necessary for language to function. Language use may operate without reference to this activity, and any kind of "fictive motion," i.e., the experiences we discussed in "Three complementary motivations for non-actual motion sentences," would appear to be epiphenomenal, as far as synchronic semantics is concerned.

This seems to be a conclusion that goes somewhat too much to in the opposite direction compared to those who, like Talmy and Langacker, more or less equate linguistic semantics and (private) "conceptualization." A middle road between the two can be found in Husserl's move to so-called generative phenomenology towards the end of his career, and in particular in the notion of *sedimentation* of meaning, proposed in the short but influential *Origin of Geometry* (Husserl 1970b). There, Husserl points out that shared (linguistic) meaning allows for endless repetitions and appropriations. This process of conventionalization and normalization gives rise to a "generative density" (Steinbock 1995) where loss of specificity inevitably occurs. When a linguistic expression becomes the correct way to refer to a certain state of affairs, this state of affairs becomes constituted in a particular manner. During this process, the original experiences, including the prelinguistic motivations for using the expression typically become buried, or "sedimented." This is in one respect a loss, but in terms of communal availability, a gain. Once meaning is available in this sense, it can be appropriated, culturally spread, and eventually transformed. Husserl focuses on this double-edged-knife role of language: it allows for meaning to be socially transmitted at the price of burying the motivations and the fully fledged experiences. Woelert (2011, p. 119) describes this dialectic process as follows:

> …sedimentation refers to a consolidating process of linguistic conceptualization, in the course of which the evident cognitive structures originally given in embodied sense-experience have certain "persisting linguistic acquisitions" superimposed on them (Husserl 1970b, p. 362). In particular, through sedimentation, linguistic concepts become more and more an immediately available, unquestioned (and sometimes even unquestionable) element of the language user's conceptual repertoire.

Thus, on the "positive" side, linguistic sedimentations serve as scaffolding and mediators of conceptual (especially: propositional) thought. On the "negative" side, language tends to bury the link to "the original activity," since in the rapid

transmission of meaning through language one need not actively relive these experiences due to the "passive" appropriation of linguistic constructions:

> There exists a kind of activity, a thinking in terms of things that have been taken up merely receptively, passively, which deals with significations only passively understood and taken over, without any of the self-evidence of original activity. (Husserl 1970b, p. 361)

In relation to the issue of non-actual motion, this would imply that Itkonen (2008) is in part correct that to understand or produce a sentence of non-actual motion does not require attentiveness to experiences such as those analysed in "Three complementary motivations for non-actual motion sentences": kinaesthetic perception, the correlational nature of intentionality or imaginative motion. However, from a Husserlian perspective, the establishment of linguistic conventions and norms does not completely sever the connection to the motivating experiences. Metaphorically speaking, the original experience can be "reanimated" and once again given a breath of life. According to Husserl, the phenomenological method is indispensable for reaching the deepest layers of sedimentations. But even when a phenomenological analysis is performed somewhat informally, as in "Three complementary motivations for non-actual motion sentences," this may be sufficient to uncover some fundamental original experiences of non-actual motion. Even more so, a naive English speaker reflecting however briefly on the non-synonymy of (1a) and (1b) would reactivate at least some of these experiences. Thus, it is not only in the "transcendental," phenomenological attitude that such experiences are available, but also in the natural attitude (of language users), if only in the margins of consciousness.

This process is in no way particular to non-actual motion sentences, but is especially prominent by them, since they show clearly how the same state of affairs can be *constituted* (in the phenomenological sense) in different ways: it is the same mountain range that is being referred in (1a) and (1b), or in Itkonen's nearly identical examples, and both sentences predicate its location in extensionally equivalent terms. Still, the state of affairs is being "construed," in cognitive linguistic terms, or constituted as a "categorical object," in phenomenological terms (Sokolowski 2000), differently. This difference amounts to a difference in *perspective*, on *how* the categorical object is being intended, and not only on *what* is intended. Thus, language reflects not only the "end product" of the constitution, but its genesis. Sokolowski (2000, p. 92) seems to underestimate this feature of language when he sharply contrasts categorical intentions (which become encoded in propositions) from the perceptual processes that give rise to them:

> […] the identity of the categorical object is presented *all at once*. In perception we have a process in which profiles follow one another sequentially, but in categorical registration the whole and its part are given *simultaneously*.…When we have an articulated whole given to us, we do not have the whole first and then the articulation. The whole as such is presented as articulated. This *simultaneity of the categorical object is a further aspect of its discreteness*, which must be contrasted with the continuous character of perceptual experience (our emphasis).

We can see this just in about any extensionally synonymous sentences, such as (17a) and (17b), where the "information structure" (in linguistic terms), i.e., the choice of what to present as "figure" in the beginning of the sentence, and what as "ground" in a locative phrase at the end, has as correlates different sequences of attention focus.

17. (a) The table is under the lamp.
    (b) The lamp is over the table.

This, again, means that language (use) sediments not only the final states of categorical intuitions, but also the "embodied sense-experiences" (in Woelert's terms) that give rise to them. In line with what we said earlier, these experiences need to be, at least in part, considered as part of the meaning of sentences: not in a "private," subjectivist sense as criticized by Itkonen, but in an intersubjective sense, that is (at least potentially) accessible to all speakers of the language. This importance of intersubjectivity and social availability is a point developed in the late works of Husserl (cf. Husserl 1970a).

The crucial point is that when this is acknowledged, we may appreciate how sedimentation gives rise to a dialectical relationship between consciousness (experience) and language, or what we have referred to as *language–consciousness interactionism* (Zlatev et al. 2012). On the one hand language draws on processes of consciousness such as perception, the temporality of experience, and imagination. But once these are sedimented in structures of linguistic reference and predication, these "persisting linguistic acquisitions" (in the words of Husserl) constitute resources for the construal/constitution of states of affairs. As we saw in this section, languages differ in the ways in which non-actual motion experiences are sedimented in non-actual motion sentences. Consequently, speakers of different languages will be differentially encouraged (though not determined, cf. Zlatev et al. 2010) to reactivate different perspectives, and thus to constitute the same state of affairs differently.

In sum, linguistic constructions, such as non-actual motion sentences, are both motivated from pre-linguistic and pre-predicative experience and at the same time provide shared semiotic resources that can be used to guide judgments (i.e., categorical intentions), resources that can be "negotiated" in communication, and used creatively to give rise to new meanings. Thus, the sedimentation of experiential motivations through linguistic conventionalization is not so much a loss as a gain that allows for constant reciprocal interaction between language and experience.

Summary and conclusions

So-called "linguistic universals," which if not literally universal are at least widely spread tendencies in the languages of the world (Croft 2003), have often been cited as evidence of fundamental properties of the human mind, especially in cognitive linguistics (Lakoff 1987; Langacker 1987; Lakoff and Johnson 1999), where linguistic meaning is seen as continuous with cognition in general. While the experientialist

semantics of this school of linguistics has contributed to a broader notion of linguistic meaning than classical truth-conditional semantics, by emphasizing notions such as construal, perspective, metaphor and embodiment, it has tended to err in two inter-related respects: (1) its concept of meaning has been unduly mental and subjectivist and (2) it has conflated experiential motivations with conventional semantics (Zlatev 2010). As the subtitle of this paper has it, both of these problems can be addressed by appreciating methods and concepts from phenomenology.

We have offered a case study of phenomenological reanalysis of experientialist semantics, by focusing on a linguistic phenomenon that has occupied a central role in cognitive linguistics, viz., sentences of non-actual motion. Through a phenomenological reanalysis of the proposals of Talmy, Langacker, and Matlock, we showed that non-actual motion is both experientially and linguistically non-unitary. At least three different features of human consciousness—enactive perception, visual scanning and imagina-tion—were argued to constitute experiential motivations for non-actual motion senten-ces, and each of these could be related to phenomenological analyses of human intentionality. Where previous suggestions have overgeneralized a particular experience into over-inclusive notions such as "ception," "subjectification," and "mental simula-tion," glossing over distinctions in both experience and language, we have argued that the three features are in fact distinct aspects of our experiential lives. On closer inspection, these non-actual motion experiences are shown to be reflected in linguistic differences as well, especially when claims of universality are not based only on the analysis of English. Thus, using concepts from "static" phenomenology (e.g., the distinction between per-ception and imagination) and "genetic" phenomenology (e.g., temporality and kinethet-ic horizon) has shown one way in which experientialist semantics can benefit from phenomenology, understood generally as "the careful description of what appears to consciousness precisely in the manner of its appearing" (Moran 2005, p. 1).

To address (and redress) the second problem of experientialist semantics (see above), we followed Husserl into "generative" phenomenology, dealing with notions of con-vention, normativity and cultural transmission. We proposed that the experiential motivations of non-actual motion sentences can be viewed as sedimented through "passive" processes of acquisition and social transmission and that this implies an interactive loop between experience and language, yielding losses in terms of original experience, but gains in terms of communal signification. In this loop, we pointed specifically to the import of adapting to conventional and available forms, giving rise to language- and culture-typical patterns, which may effect a guiding, though not determinative, role on categorical thought. Non-actual motion sentences high-lighted in this respect an important feature of language, which is sometimes forgotten in phenomenological contexts: that what is sedimented are not only intentional objects such as states of affairs but also aspects of how they are given, i.e., the original, temporal, bodily experiences themselves. Since cogni-tive semantics has emphasized such aspects of meaning, phenomenology can itself benefit from experientialist semantics, especially when it turns its focus from pre-predicative to predicative, linguistic intentionality.

In sum, what we hope to have enacted, in the content as well as the structure of this article, is an argument for the need of a productive reciprocal fertilization between experientialist semantics and phenomenology, mirroring the dialectical relationship between language and consciousness.

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