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Commentary on Vyvyan Evans'

The Structure of Time
Language, meaning and temporal cognition

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This well-written and in-depth study is devoted to the semantic analysis of the word *time*. This work, which belongs to that kind of tradition of research known as cognitive linguistics, is based on an original approach to semantics, namely, principled polysemy, and adopts an interesting methodology developed on the basis of such an approach. Given the importance that this approach may have not only for the semantic analysis of the word time in particular but also for semantics in general as a scientific discipline, it is useful to consider in some detail the main general theoretical assumptions underlying Evans' work before examining his analysis of the word time.

The main theoretical assumptions on which Evans' work is based are the following:

1) "The study of linguistic semantics offers a direct way of investigating the human conceptual system" (Evans, 2004, p. 6). As Evans explains, the conceptual system "is that attribute of mind which organises and stores information which has achieved REPRESENTATIONAL STATUS. Information which has achieved representational status can be recalled, modelled, employed for purposes of reasoning, projection, abstraction, etc. Hence, the content of the conceptual system is available to symbolic processes such as language, which pairs a physical symbol (e.g., a sound) with a meaning element" (Evans, 2004, p. 6). Language then symbolises information to which we have conscious access. Evans terms the meaning elements which are paired with linguistic symbols, LEXICAL CONCEPTS (Evans, 2004, p. 6). Lexical concepts are just a subset of the range of concepts which inhere in the conceptual system.
2) There is a fundamental bifurcation in the conceptual system (Evans, 2004, p. 6): one must distinguish concepts of sensorimotor, i.e., external origin, such as those which relate to visual-spatial experiences and are symbolised by the words like "near" and "motion", from concepts of subjective, internal origin, such as "time"[1] and "similarity". Concepts of external origin are a

[1] "I will argue that temporality is fundamentally internal and hence phenomenological in origin" (Evans, 2004, p. 7).

result of the elaboration in conceptual terms of visual-spatial information, or INTER-SUBJECTIVE INFORMATION; concepts of subjective origin are a result of the elaboration in cognitive terms of internal states, or SUBJECTIVE INFORMATION (Evans, 2004, p. 34). While inter-subjective information is quite easily elaborated in conceptual terms, and consequently encoded and "translated" in linguistic terms, subjective information is difficult to conceptualize and verbalise. Indeed, it is easier to talk about what we perceive out in space than to talk about the states of our body or about what we feel. An instance of the difficulty of directly verbalising subjective information is given by the experience of time: in fact, we ordinarily think and talk about time not in time's own terms, but rather in terms of motion through, and location in, three-dimensional space (Evans, 2004, p. 5), as evidenced by sentences such as "We are getting close to Christmas" or "The deadline is approaching". As Jackendoff has suggested (Jackendoff, 1992), our relatively poor ability to verbalise internal states compared to our relatively good ability to articulate external information, may be due to a lack of sufficient "hardwiring" between the body format, which encodes subjective information pertaining to internal states, and the conceptual format, which provides information in a form ready for linguistic encoding, compared to the strong connection between the visual or 3D format, which encodes visual-spatial information from the external world, that is, inter-subjective information, and the conceptual format. It is highly plausible that the human brain has been able to circumvent the lack of "hardwiring" between the body format and the conceptual format by directly connecting the body format to the visual/3 D format. In such a way, subjective information is elaborated in terms of inter-subjective, external sensory experience, and can therefore more readily and easily enter into focal consciousness and be verbalised. According to Evans, only by taking into account the fundamental bifurcation in the conceptual system between concepts of subjective origin and concepts of external origin, can the METAPHYSICAL PROBLEM of time[2] and the LINGUISTIC PROBLEM of time[3] be properly addressed. While time, relating to pre-conceptual experiences, is, as Evans claims, fundamentally subjective in nature and of internal provenance, the linguistic evidence, which reflects conceptual organisation conventionalised into a format encodable in language, indicates that it is structured at the conceptual level in terms of content which relates ultimately to sensory domains which are not primarily temporal in nature.

[2] "While we intuitively experience time there appears to be nothing tangible in the world which can be pointed to and identified as time" (Evans, 2004, p. 252); "What is the nature and status of time? Is time a primitive, an attribute of the physical cosmos, as suggested by modern physics, or is time (…) an abstraction derived from comparing events, as suggested by, for instance, Lakoff and Johnson (…), or is time (…) something internal in nature (…), primarily phenomenological, deriving from internal cognitive and other perceptual processes, as suggested by phenomenologists such as Husserl and Bergson?" (Evans, 2004, pp. 4-5).

[3] "Why do we use language pertaining to motion through three-dimensional space and locations in three-dimensional space in order to think and talk about time?" (Evans, 2004, p. 5).

3) Concepts, despite being usually characterized as mental representations, that is, as stored and coded information referring to lived experiences, which can be recalled and modelled for purposes of reasoning, projection, abstraction, even when those experiences are no longer actually and directly accessible, strictly speaking "are not representations of anything. They do not, after all, re-present. Rather, they constitute what is meaningful for us, and in this sense, they *are* our reality" (Evans, 2004, p. 257). This is due to the fact that we do not and cannot have *direct* conscious access to the world as it "really" is. There is not a pre-given objective, mind-independent reality to which concepts refer: "human consciousness only has direct access to the conceptual system" (Evans, 2004, p. 257). The "reality" to which we have conscious access is a consequence, on the one hand, of the nature of our physiology (hummingbirds, which can hover, presumably experience gravity in a different way than humans do; human vision, which is trichromatic, gives rise to a kind of perceptual experience that is certainly different from that experienced by organisms that are dichromats, tetrachromats or pentachomats) and, on the other hand, of unconscious perceptual processes and mechanisms, which, as evidenced by the experiments contrived by the Gestalt psychologists, shape our conscious experience imposing structures and organizations upon the perceptual input that are not available in the input itself. What we experience, what we are directly aware of, does not necessarily equate with what may be "out there" in the world. What we have conscious access to is only what Jackendoff (1983) calls the "projected world", that is, the world as it is organized by our mind. "The world we experience, i.e., our perceived world, and ultimately the world to which we have conscious access, is not pre-given in the sense of being mind-independent. Rather, it is constructed by virtue of our particular evolutionary history and the nature of our embodiment" (Evans, 2004, p. 43). Our reality as we perceive it, our conceptual system and what is meaningful for us are largely determined and mediated by the nature of our physiology and our evolutionary history. In this sense, meaning is fundamentally a reflection of our embodied experience (Evans, 2004, p. 55). Consequently, theories of meaning such as those put forward by formal, truth-conditional and model-theoretic semantics, which assume that the information conveyed by language is about an objectively verifiable world, "must be erroneous" (Evans, 2004, p. 55). Equally destined to encounter inevitable and insurmountable difficulties seem to be all those kinds of semantics that attempt to define meaning in propositional terms or in terms of semantic features, such as the semantics proposed by Katz. Meanings, or lexical concepts, are sub-symbolic: they are not primarily linguistic, but rather embodied, deriving from perceptual analysis and redescription. In addition, they are informed by our interaction with the world and a whole welter of background knowledge. Therefore, any approach that intends to describe them in

terms of semantic features, or in propositional terms, proves to be hopelessly inadequate because it cannot capture all the embodied information and background knowledge that we actually have access to when using them (Evans, 2004, p. 53).

4) The meanings of words can be best accounted for and analyzed by adopting a PRINCIPLED POLYSEMY approach. This approach "seeks to account for the meanings associated with words as not being absolute and fixed, but rather as being capable of changing over time" (Evans, 2004, p. 79). According to the principled polysemy approach, lexical concepts are mutable and dynamic in nature; hence, through word-use, new lexical concepts or SENSES[4] can be generated and associated with a particular word, thus extending the range of meanings associated with it. This process results in new lexical concepts becoming conventionalised, such that they achieve mental representation independent of the antecedent lexical concept which motivated their occurrence. The main tenets of the principled polysemy can be summarised as follows (Evans, 2004, p. 80): a) a word such as *time* has, at the synchronic level, a number of distinct lexical concepts or senses independently stored in semantic memory; b) these distinct senses derive from a historically earlier sense (or senses): the ORIGINATION SENSE (or senses); c) the distinct senses are organized with respect to a SANCTIONING SENSE, which typically (although not inevitably) has parallels with the origination sense: the sanctioning sense is taken as prototypical in that it constitutes the "citation" sense that language users would be most likely to produce in response to the question: "What does the word X mean?"; d) at the synchronic level, the distinct senses can be analysed as being related by virtue of a semantic network: relations between senses are modelled in terms of relative distance to the central sanctioning sense, with more peripheral members being less-related to the sanctioning sense than more central senses; e) the distinct senses are the result of a dynamic process of meaning-extension, which is a function of language-use and socio-physical experience. An important role in the development of new lexical concepts is played by the mechanisms of EXPERIENTIAL CORRELATION, and of PERCEPTUAL RESEMBLANCE (Evans, 2004, pp. 46-49), the former giving rise to associations at the conceptual level due to tight and recurring correlations between two different kinds of experience, and the latter establishing connections between concepts on the basis of perceived similarities and shared characteristics. The mechanisms of experiential correlation and perceptual resemblances often give rise to implicatures or situated inferences, that is, contextually-derived meanings, which, through recurrence, can become conventionally associated with a particular lexical form associated with the context of use. Once an implicature has become conventionally associated with a particular form, this derived sense can, via

[4] Evans (2004, p. 261) advises that he uses the term "sense" interchangeably with "lexical concept".

PRAGMATIC STRENTHENING (Evans, 2004, p. 99-101), be employed in contexts of use unrelated to the original context which gave rise to the implicature in the first place; f) language users do not inevitably recognize that all senses associated with a particular form are synchronically related. Therefore, the principled polysemy approach put forward by Evans, by claiming that a word such as *time* has more, different, but anyway related, meanings associated with it, differs both from the "homonymy approach", which admits that a lexical form can have different meanings associated with it, but that they constitute a bundle of completely distinct, unrelated senses that merely by accident happen to be associated with the same lexical form, and the "monosemy approach", which holds that a lexical form is paired only with a highly abstract sense, and that the various meanings that sometimes happen to be associated with that lexical form would simply be explained in terms of contextually derived variants of the single monosemous abstract sense. According to Evans, the homonymy approach suffers from ignoring any commonality among the usages of a lexical form, and fails to explain why a form such as *time* should have become conventionally associated with newer distinct meanings, rather than a new phonological form being employed for them. The monosemy approach, on the contrary, fails to recognize that a word such as *time* has a number of different meanings associated with it that are demonstrably context-independent, and is unable to account for the fact that the context cannot always be invoked in order to explain differences in interpretation and distinctions of meaning. Evans provides then the criteria (i) for distinguishing distinct lexical concepts associated with a lexical form, and (ii) for determining the sanctioning sense of a lexical form.

i. Criteria for determining distinct senses. These criteria or decision principles serve "to identify when a particular usage of a lexical item constitutes a distinct conventionalised lexical concept, instantiated in semantic memory, and when it constitutes a context-derived meaning constructed on-line for local purposes of understanding" (Evans, 2004, p. 85). These criteria supply a means of avoiding committing the POLYSEMY FALLACY, that is, attributing to the single word what instead pertains to the context, thus failing to distinguish between meanings that are conventionally associated with a word (i.e., word-meaning), and meanings resulting from the way a word interacts in context (i.e., utterance-meaning). Evans proposes three different criteria for determining whether a particular instance of a lexical item counts as a distinct sense (Evans, 2004, pp. 93-96): a) the MEANING CRITERION: for a sense to count as distinct it must contain additional meaning not apparent in any other senses associated with the lexical item; b) the CONCEPT ELABORATION CRITERION: the putatively

distinct lexical concept will feature unique or highly distinct patterns of elaboration; c) the GRAMMATICAL CRITERION: a distinct lexical concept may manifest unique or highly distinct structural dependencies, that is, it may occur in unique grammatical constructions. Evans hypothesises that for a lexical concept to count as distinct, it must satisfy the meaning criterion and at least one other. "The application of at least one other criterion is meant to safeguard judgements of meaning distinctiveness (on the part of the analyst), from the undue influence of context in identifying a particular usage as a particular lexical concept"(Evans, 2004, p. 94). This methodology should then permit to establish the range of lexical concepts associated with a given lexical item instantiated as distinct units in semantic memory, independent of context.

ii. Criteria for determining the sanctioning sense. These criteria provide clear decision principles for determining what counts as the sanctioning sense in the semantic network associated with a given lexical item. Evans proposes five criteria (Evans, 2004, p. 97): a) the historically earliest attested meaning; b) predominance (in the sense of frequency of use of a particular sense) in the semantic network; c) predictability regarding other senses: likely candidates for the sanctioning sense are those from which the other senses would most naturally be derived; d) a sense which has a plausible cognitive antecedent; e) a sense which relates to lived human experience, that is, the synchronic lexical concept which best matches the lived experience referred to by the lexical item.

On the basis of these theoretical assumptions, Evans proceeds to analyze, and put forward his theory of, time.

5) Evan's central thesis is that temporality is fundamentally subjective in nature and phenomenological in origin: "temporality is a real and directly perceived subjective experience" (Evans, 204, p. 31). Time is ultimately neither an empirical primitive, that is, a physical feature of an objective world, nor a mental achievement, an abstraction derived from the relations holding between external events, but an internal, subjective phenomenon related to the perceptual mechanisms that process sensory experience. Our awareness of time would be a consequence of the various "timing mechanisms" in the brain, such as the "perceptual moments" (Evans, 2004, pp. 22-27), which are necessary for and underpin perceptual processing. As such, time enters into our experience of everything as it is fundamental to the way in which perceptual processes operate: it is "a pre-requisite for abilities such as event perception and comparison, rather than being an abstraction based on such phenomena" (Evans,

2004, p. 9). That time is not an abstraction based on phenomena such as event comparison, a theory put forward by Gibson (1975, 1986), who argued that while events are perceivable but time is not, and by Lakoff and Johnson (1999), who argued that the concept of time results from an antecedent awareness of ongoing change exhibited by events in the world, is clearly shown by the fact that a) "we actually experience the 'passage' of time whether there has been a change in the world-state or not" (Evans, 2004, p. 64) as evidenced by situations of relative sensory-deprivation (such as windowless, sound-proofed cells) in which subjects are still aware of the passage of time, and b) our experience of time appears to be independent of the nature of the external events we are exposed to, that is, the way they change and move. The hypotheses that time is fundamentally subjective in nature and that there exists a basic bifurcation in the conceptual system between concepts of subjective origin and concepts of external origin, explain the metaphysical and the linguistic problems of time. We are aware of time even if there seems to be nothing tangible in the world which can be pointed to and identified as time (the metaphysical problem of time), because time is subjective in essence and of internal provenance - temporality being "traceable to specific cognitive apparatus and processes" (Evans, 2004, p. 256) such as the neurologically instantiated temporal codes or rhythms that underpin perceptual processing - and because we can experience and perceive it directly. We use language pertaining to motion through three-dimensional space in order to think and talk about time (the linguistic problem of time) because subjective information is difficult to conceptualize and verbalise. In order to conceptualize and verbalise it, we have to elaborate it in terms of external, inter-subjective sensory experience, such as the visual-spatial one.

6) According to Evans, the subjective experience of temporality is fundamentally durational in nature, and duration is the sanctioning sense associated with the lexical item *time*. As such, the durational aspect of temporality represents a prerequisite for the development (and not a consequence, as instead many authors claim) of the other important experiences that are usually conceived as being strictly linked to time, such as the awareness of change, the experience of succession, and the possibility of distinguishing past from present and from future. A number of reasons lead Evans to hypothesise that the experience of time is primarily durational in nature, and that duration constitutes the sanctioning sense associated with the lexical item *time*. Firstly, as we have already seen, we can experience the "passage" of time independently of whether there has actually been a change in the world-state. Secondly, the experience of duration is independent of the nature of the external events: the experience of protracted duration can result from both states in which the stimulus array is impoverished and events that, on the contrary, are extremely rich in sense-perceptory terms. Thirdly, "it is our awareness of and ability to

assess magnitude of duration which first and foremost allows us to distinguish past from present, and thus allows us to experience events as successive" (Evans, 2004, p. 112). Fourthly, the neurologically instantiated temporal codes that provide the basis for perceptual processing, and hence for our subjective awareness of time, are durational in nature. Fifthly, etymological evidence from linguistics suggests that it is "duration" which may constitute the historically earliest sense associated with the lexical item *time*.

7) Despite referring primarily to the durational aspect, "the lexical item *time* is conventionally associated with a range of distinct temporal lexical concepts" (Evans, 2004, p. 72). By systematically using his three decision principles (the meaning criterion, the concept elaboration criterion, and the grammatical criterion), Evans is able to distinguish height different lexical concepts associated with the lexical item *time*: the sanctioning sense of duration, from which the other senses appear to be derived, the moment sense, the instance sense, the event sense, the matrix sense, the agentive sense, the measurement-system sense and the commodity sense. As we have seen, this fact can be easily accounted for by the principled polysemy approach proposed by Evans. From the synchronic level, the range of distinct senses can be modelled in terms of a semantic network where the more peripheral members are less-related to the central sanctioning sense than the more central senses. Fig. 1 presents a diagrammatic view of the semantic network for *time*, where each node represents a distinct sense and arrows represent the degree of relatedness between distinct senses.

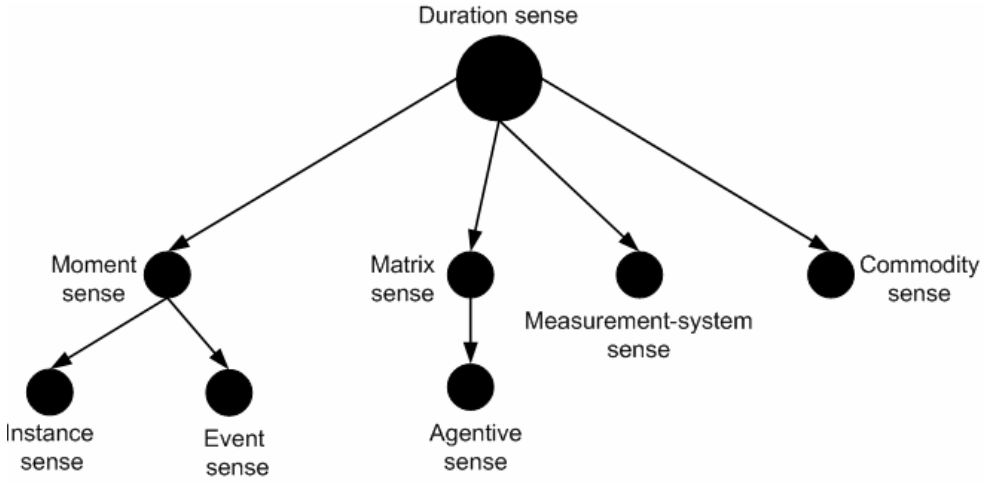

Fig. 1. The semantic network for "time" (adapted from Evans, 2004)

Let us see now more in detail how Evans explains and motivates the existence of these distinct lexical concepts.

8) The duration sense, which is exemplified by sentences such as "The relationship lasted a long/short time" or "It was some/a short/a long time ago that they met", prompts for "a lexical concept which constitutes an interval bounded by two boundary events, i.e., the beginning and ending of the interval" (Evans, 2004, p. 108). Duration can then be defined as "the INTERVAL holding or extending between the two boundary (beginning and ending) events" (Evans, 2004, p. 108). Since an interval is defined in terms of a beginning and an ending event, "it is entailed that an interval results from a before-after relation holding between two discrete events. Put another way, an interval of duration results form SUCCESSION" (Evans, 2004, p. 108). Usually, the duration sense is elaborated in terms of physical length ("They had only been together a short time before he proposed"), which may be motivated by a tight correlation in experience between the experience of duration and the experience of length relating to horizontal extension. "The clearest examples of this kind of correlation come from the ubiquitous experience of the journeys we undertake on a daily basis (…) Longer journeys are typically experienced as lasting for a greater period of time, while shorter journeys are experienced as lasting for a lesser period of time" (Evans, 2004, p. 114). Correlations of this kind may give rise to associations at the conceptual level such that lexical concepts relating to length come to be metaphorically mapped onto the lexical concept of duration. The duration sense subsumes a distinction between a putatively normal versus two kinds of abnormal experience of duration: temporal compression and protracted duration[5]. The former is exemplified by a sentence like: "Time flies (by) when you're having fun", the latter by: "While I was waiting in the surgery for my doctor's appointment the time just seemed to crawl by".

9) The moment sense does not prompt for a reading relating to an interval, as instead the duration sense does, but rather to a discrete point: "The time for a decision has arrived/come"; "What size was she at the time he was fourteen?". That the moment sense is an additional meaning not apparent in the duration sense is corroborated by the concept elaboration criterion. "A moment reading appears to be elaborated solely in terms of deictic motion: that is, motion which presupposes a particular deictic centre with respect to which the motion takes place" (Evans, 2004, p. 124). Unlike the moment sense, what is important in the motion elaboration of the duration sense, which usually takes place for its two variants of protracted duration and temporal compression, is not so much that motion occurs with respect to a salient deictic centre, as the relative rapidity (or otherwise) of the motion event. Evans puts forward two different

[5] On the distinction between these two different kinds of temporal experience, see Flaherty (1999).

motivations for the derivation of the moment sense from the duration sense: a) the first relates to the phenomenon of time embeddedness, that is, the fact that all social acts are temporally fitted inside of larger social acts. As certain events or intervals are embedded within other, larger events or intervals, it is highly plausible that the embedded intervals come to be reanalysed without reference to their duration, that is, as discrete "points" within the greater interval; b) the second relates to the phenomenon of temporal compression: "past intervals held in memory may, due to the erosion of episodic memory, lose their durational significance, and accordingly become point-like" (Evans, 2004, p. 129).

10) The instance sense prompts for a reading in which an instance of a particular event, activity or process is being referenced: "Devine improved for the fourth time this winter when he reached 64.40 metres at a meeting in Melbourne"; "This time, it was a bit more serious because I got a registered letter". In terms of the concept elaboration criterion, it appears that the instance sense has no particular patterns of conceptual imagery associated with it. "This may follow as an instance is precisely that, an instance (of something else). Hence, instances only have structure in so far as they are tokens of other types of experiences, and have no inherent structure beyond the experiences they are instances of" (Evans, 2004, p. 134). In terms of the grammatical criterion, the instance sense is highly distinctive: it can be formalised, like the moment sense, as a count noun; however, unlike the moment sense (and the duration sense), the instance sense can be pre-modified by both ordinal numbers and cardinal numbers. This follows as the instance sense relates to distinct occurrences of the same event, and hence is iterative. A plausible motivation for the derivation of the instance sense from the moment sense relates to the fact that the distinct points embedded within a larger interval can be enumerated by virtue of not being unique: that is, they are construed as being instances of similar vents.

11) The event sense prompts for a conceptualisation in which a specific event is referenced: "The young woman's time (=labour) approached"; "His time (=death) has come/arrived"; "The barman called time". Unlike the moment sense, which references a purely temporal point within a particular event-sequence, the event sense references an experiential point - that is, a particular external occurrence - in an event-sequence. Unlike the instance sense, which references the doing by an agent ("He did it 5 times in a row"), the event sense references the thing done, the event. Unlike the duration sense, which references to the durative aspect of the interval, the event sense designates one aspect of the interval, namely the onset or offset: it references a boundary which marks a transition. In terms of the grammatical criterion, the event sense, unlike the moment sense, does not undergo determination by the definite or indefinite articles, although it can be pre-modified by other nominal constructions. Moreover, the event sense is

countable. Evans concludes that: "In so far as the event sense manifests distinct grammatical behaviour, this constitutes evidence that we should consider it to be an independent lexical concept associated with *time*" (Evans, 2004, pp. 138-139). A plausible motivation for the derivation of the event sense from the moment sense may be the correlation between a particular moment and the event which takes place at that moment.

12) In the matrix sense, *time* indexes an unbounded entity which has an infinite elapse and is not constrained by the interval holding between individual events: an entity whose passage is unaffected by external events and within whose frame events unfold and states persist. As such, it is conceived as a manifold which contains and subsumes all other events and is thus independent of them. The matrix sense is exemplified by sentences such as: "Time flows/runs/goes on forever", "Time has no end", "We live in time" and Newton's definition: "Time, of itself, and from its own nature, flows equably without relation to anything external", which clearly highlights the ontological reality of time and its independence from any external events. In terms of the grammatical criterion, the matrix sense is formally a mass noun; in fact, it cannot be determined by the indefinite article. In addition, it cannot be determined by the definite article, either. As Evans observes, a reason why the matrix sense may be incompatible with the definite article is that it is already specific, "that is, there is only a single unique temporal matrix, which is conceived as constituting the event which subsumes all others" (Evans, 2004, p. 73). A consequence of viewing the temporal matrix as the event in which other events occur, and thus existing independently of them, is that it can be conceptualized in at least two different ways: either in terms of motion, that is, as something that flows, carrying new events along with it into being and view, like in "Time like an ever-rolling stream/Bears all its sons away", "Time passes" and "Time runs/goes on forever", or in terms of non-motion content, that is, as a bounded three-dimensional location, or a planar two-dimensional location in which events occur, like in "We live in time" and "In the movie the protagonist travels back across time to save the world". Evans suggests that the matrix sense may have been derived by the continuous and tight correlation between internal temporality and a putatively external on-going world-state. "Due to this extremely tight correlation, it is plausible that temporality came to be associated with 'external' events, processes, states and even objects. As such, temporality has come to be attributed to the external world which thus came to be conceptualized as possessing its own temporality independent of the subjective experience of time with which the external world is correlated" (Evans, 2004, p. 153). Once temporality has become attributed to the external world, the notions of permanence and extendedness may have become correlated with temporality, giving rise to the concepts of eternity and infinite duration.

13) Unlike the matrix sense, the agentive sense relates to an entity which is conceived not just as serving to manifest change or by virtue of which events can be judged to have occurred, but as one which actually brings about and causes change: "Time is the great physician", "Time, the avenger", "Time has aged me", "Time reveals all". The agentive sense prompts then for an entity which has the ability to affect us and our environment: an entity actively involved in the occurrence of specific events. The elaboration of the agentive sense in terms of acts which bring about a change of state is due to the experiential correlation between such acts and their agent: after all, as Evans observes, a change of state is unlikely to occur unless there is an agent which performs it (Evans, 2004, p. 161). In terms of the grammatical criterion, the agentive sense is unique in that it appears to behave like a proper noun: it cannot be pluralized and cannot undergo determination by an article. The agentive sense represents a development of and an extension from the matrix sense. A plausible motivation for the derivation may be the correlation between the conception of time as a matrix that manifests new events and the awareness of change in the world-state brought about by the temporal matrix.

14) In the measurement-system sense, *time* prompts for an entity which constitutes a system for measuring duration, and serves to regulate and co-ordinate a particular kind of interpersonal activity: "In the 1850s Railway time was introduced as standard", "To play out of time", "Eastern Standard Time is five hours behind Greenwich Mean Time", "We get paid double time on public holidays". According to Evans: "Temporal measurement arises due to the correlation between periodic behavior in the external world and our experience of duration. As periodic behavior correlates with internal temporal experience, it can be employed to represent temporality" (Evans, 2004, p. 169). Physical entities exhibiting periodicity can then be employed to represent and measure the duration with which they are correlated. In terms of the concept elaboration criterion, the distinctiveness of the measurement-system is especially evident in those sentences that refer to time-reckoning such as: "Have you learnt to tell the time?", which clearly show that it is the periodic behavior of a physical entity which is being measured rather than the phenomenological experience itself. The measurement-system can also be elaborated in terms of motion content, as in "The time is approaching noon". Grammatically, the measurement-system sense is distinct in that it can take either the form of a count noun, and hence be determined by the indefinite article, as in: "A time is a short syllable", a mass noun, and hence be determined by a zero article rather than the indefinite article, as in: "To beat time", or a proper noun, and hence not undergo determination by an article, as in "Eastern Standard Time is five hours behind Greenwich Mean Time".

15) The commodity sense refers to an entity which is conceived as being valuable and hence can be exchanged, traded, acquired, possessed, etc.: "Time is money"; "Time has become a scarce commodity"; "She has invested a lot of time in that relationship"; "The psychiatrist charges a lot for her time". As the central characteristic of this sense is of an entity which is valuable, content relating to valuable resources such as money ("We need to invest our time more wisely"), personnel ("to manage time"), natural resources ("to find time"), manufactured products, can all serve to elaborate the commodity sense. The commodity sense can also be elaborated in terms of expressions relating to quantity ("How much time can you spare?") and in terms of motion ("Time is running out"). In terms of the grammatical criterion, the commodity sense is a mass noun. According to Evans (2004, p. 182), there are three plausible motivations for the derivation of the commodity sense from the duration sense: a) firstly, as intervals of time are finite, in certain contexts this may implicate value; b) secondly, as in the modern industrialized world we are paid in terms of conventionally fixed temporal intervals, this implicates value; c) thirdly, as having more time entails greater opportunity to realize goals, this also implicate that time is valuable.

16) According to Evans (2004, p. 141), while the lexical concepts of duration, temporal moment, temporal event and temporal instance are PRIMARY temporal concepts because they appear to relate to phenomenologically-basic cognitive abilities which enter into almost every aspect of perceptual processing and cognitive evaluation, the matrix sense, the commodity sense, the measurement-system sense and the agentive sense are SECONDARY temporal concepts because they have less claim to be foundational and appear to be derived more from socio-cultural imperatives. Evans (2004, p. 185) suggests that the lexical concepts referenced by the forms *present*, *past* and *future* are also primary temporal concepts because they derive from antecedent cognitive functioning. Evans maintains that "The concept associated with the form *present* may be traceable to the perceptual moment in the range of approximately 2-3 seconds. The concept of the Past relates, ultimately, (…) to the memory system, which serves as a mechanism for retaining and integrating previous perceptual moments. Anticipation, which is a function of the present, may be a learning-effect of memory and hence may give rise to the concept of Future" (Evans, 2004, p. 188). As the lexical concepts of *present*, *past* and *future* derive from antecedent cognitive functioning, they are subjective in origin, as opposed to concepts based on external sensory experience. Therefore, for subjective concepts such as these to be accessible to the conceptual system, they are likely to be elaborated in terms of conceptual content derived from sensory experience. In a language such as English the conceptual content which serves to elaborate these concepts derives from locational content, that is, conceptual material redescribed

from sensorimotor experience. As far as the lexical concept lexicalized by the form *present* is concerned, there is good evidence that it is elaborated in terms of conceptual structure pertaining to the spatio-physical environment proximal to the experiencer, that is, in terms of a physical location co-locational with the experiencer. This may be due to the tight correlation existing between the temporal present and the particular location we happen to occupy at any given time. The concept of Future is elaborated in terms of conceptual content pertaining to being located in front of the experiencer ("The future lies in front of us", "She has a bright future ahead/in front of her"). Evans argues that this may be due to a tight correlation between the concept of Future, which derives from the present anticipation of realizing a goal, and the goal being located in front of the experiencer (this follows as, given human physiology and so the asimmetry of the front-back axis, goals are necessarily located in front of the experiencer, as this is the direction of orientation and hence locomotion. The concept of Past, on the contrary, is elaborated in terms of conceptual content pertaining to being located behind the experiencer ("The past is behind me"). Although the pattern in which the lexical concepts of Past and Future are elaborated in terms of content pertaining to being located behind and in front of the experiencer respectively is cross-linguistically robust (you can find it in languages as diverse from English as the Niger-Congo language Wolof, Japanese and Chinese), it is not universally adopted. Certain languages such as Aymara, a language spoken in the Andean region of Peru, Chile and Bolivia, elaborate the concepts of Past and Future in terms that are at odds with the pattern found in English: in Aymara, the expression to denote the Future relates to being located behind, while the expression to denote the Past derives from the lexeme relating to being located in front. Most probably this is due to the fact that Aymara conceptualizes Past and Future in terms of visual content instead of locational content.

Undoubtedly, the approach to semantics proposed by Evans, that is, principled semantics, proves to be more adequate than a monosemy approach or a homonymy approach for accounting for and explaining phenomena that are well attested and evidenced by etymological, philological and linguistic studies. For example, while a pure monosemy approach could certainly account for the meaning of some classes of words, such as conjunctions, prepositions, articles, pronouns, the main adverbs, very basic verbs, such as "to be" and " to have", and the morphemes specifying the grammatical cases, genre, and number, the tense and mood of verbs, etc., in a word, what Benedetti has identified as mental categories (Benedetti, 2001, 2004)[6], it cannot however account for all those

[6] The use of the term "mental category" was first introduced in linguistics by Silvio Ceccato to identify all those words whose meaning does not refer to an observable or sensible entity, but to a combination of attentional states. The list of words identified by Ceccato as mental categories included not only the classes of words considered by Benedetti, but

words whose meanings, despite stemming from the same historically earlier sense (what Evans would call the origination sense), designate as distinct and different entities as a physical object and a mental category. The word "volume", for example, identifies both a physical object, that is, a book, and an abstract entity more akin to a pure mental category than to a physical object, that is, the amount of space in a container or occupied by a substance. As Benedetti argues (Benedetti, 2001), the monosemy approach cannot account for the difference existing between the literal[7] or original meaning of a word and the meanings derived from its extended or figurative uses. That the original meaning differs from and is not the same as the extended or figurative ones is supported by a body of evidences: a) the appearance of an extended or figurative meaning is so recent that it can easily be documented: only quite recently from an historical point of view has a word such as "left" begun to designate a specific political party; b) the humorous use by comics of the different meanings of a word (included the extended or figurative ones) to produce puns or ironic or comical effects; c) the fact that while a given language has developed extended or figurative meanings of a given word, another language has not: for instance, while the Italian language has developed an extended meaning of the verb "mangiare" ("to eat") to indicate gaining possession of a chesspiece, English language has not; d) some words, especially adjectives, while being perfectly synonymic in their extended or figurative use, are not so in their literal use: for example, the Italian adjectives "piccola" ("little", "small"), "leggera" ("light"), "debole" ("weak", "feeble"), "poca" ("little"), "scarsa" ("poor", "short"), and "bassa" ("low", "short") are interchangeable when used in their extended or figurative sense, as when they are used in association with a word designating a pure mental content, such as "differenza" ("difference"), while they are not synonyms when used in their literal sense, as when they are used in association with a word designating a physical object; e) usually, there is wide agreement between dictionary compilers on the existence of figurative or extended meanings that are different from the literal one.

Likewise, a pure homonymy approach cannot account for the fundamental fact, well attested by etymological and philological studies, that language constitutes an evolving system in which: a) the meanings associated with words may not only undergo changes in time, but also, through a process of metaphorical extension, give birth to new meanings; b) these new meanings, despite being different from the original ones, remain associated to the lexical form to which the original meanings were associated, instead of being associated to new lexical forms. By overlooking this

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also nouns such as "time", "space", "matter, "point", "line", "cause", "effect", "class", gender", adjectives such as "different", equal", and less basic verbs such as the Italian "tirare" and "spingere": see Ceccato & Zonta (1980) and Vaccarino (1974).

[7] While the concept of "literal" may sometimes prove to be ambiguous and problematic in linguistics (cfr. Ariel, 2002), I think that most of the time it is nonetheless useful because it allows us to distinguish somehow what a native speaker feels to be the basic and usual meaning of a word from its extended or figurative meanings.

evidence, the homonymy approach fails then to consider the fact that there must be some degree of commonality and relatedness between the yet distinct original and extended meanings associated with a given word. In fact, if the meanings associated to a given word were completely distinct and unrelated to each other, there should be no reason why they remained associated to the same original lexical form rather than being associated to completely new lexical forms.

Evans' polysemy approach seems then to offer a better way of dealing with and accounting for a number of well attested linguistic phenomena than a pure monosemy or homonymy approach could do. Moreover, by providing the methodological criteria for distinguishing between the conventional meaning, which is instantiated in semantic memory, associated with a word and the utterance meaning resulting from the way words interact in contexts, the polysemy approach allows researchers to avoid the polysemy fallacy.

The polysemy approach alone, however, does not seem to be capable of guaranteeing against one of the main problems raised by semantic studies: the circular definition of the meanings of words, that is, the fact that the meanings of words are defined through other words, whose meanings are in turn in need of definition. Circularity entails an unavoidable *regressus ad infinitum*, which represents a major and severe drawback for semantics. While interesting principally the work of the semanticists belonging to the structuralist tradition[8], the problem also affects cognitive linguists[9] (all those kinds of semantics that can be grouped under the general term of Logical-philosophical Semantics[10], such as truth-conditional semantics, model-theoretic semantics, and intensional semantics, do not seem to be affected by the problem of circularity. However, this is due not so much to the fact the Logical-philosophical Semantics offers a better solution, as to the fact that it is not interested in meaning altogether. Actually, Logical-philosophical semantics is principally interested in describing in logical or set-theoretical terms the relationship between the component parts of a sentence or phrase, regardless of the specific content of each component part). When performing their analyses, semanticists usually define the meaning of words in terms of other words for which, however, they do not provide any satisfactory and positive, non-linguistic definition. According to Bierwisch (1970), for example, the meanings of words can be analyzed in terms of the various combinations of a relatively small set of very general semantic components (or features). For example, the meaning of "boy" is defined as the following combination of semantic components: "ANIMATE and HUMAN and MALE and not ADULT". Although Bierwisch points out that "semantic components" are not part of the vocabulary of language itself, but rather "theoretical elements" or "entities" representing "complex psychological structures and mechanisms", he does

[8] See Violi (1997).
[9] See for example my criticism of Talmy's cognitive semantics (Marchetti, 2006).
[10] Violi (1997).

not explain what these mechanisms and structures are and what they consist of. Therefore, semantic components are left undefined and continue to maintain the status of "lexical entries of any natural language", despite Bierwisch's good intentions. Consequently, one does not know how one can get out of the pure linguistic level of description and reduce semantic components to non-linguistic terms. The proposal of semantic components does not represent therefore a real, positive solution to the problem of defining the meanings of words: it simply puts it off. Likewise, but more systematically, Wierzbicka (1996) analyses the meanings of words by resorting to the combinations of a set of 55 basic "semantic primitives", such as "I", "you", "this", "some", etc. For Wierzbicka, semantic primitives are universal and innate: as such, they cannot be defined. Consequently, once again, we are left at the end with nothing but a set of words which are in need of a positive, non-linguistic definition, and which we cannot get out of. Because of this fact, we must necessarily content ourselves with analyzing and defining the meanings of words through other (undefined) words, in an endless circularity, thus remaining inside a pure linguistic level of description. Jackendoff (1983) assumes the existence of a conceptual structure - made up of conceptual constituents, each of which belongs to one of a small set of major ontological categories such as Thing, Event, State, Place and Path. The conceptual structure is strictly connected with the visual system, which in turn is strictly connected with the system encoding subjective information pertaining to internal, bodily states: these connections make the various representational systems (perceptual, conceptual, motor, etc.) highly compatible and reciprocally accessible. The meanings of words would be the expression of such a conceptual structure. Therefore, for Jackendoff, lexical meanings coincide with, and can be analyzed in terms of, the constituents of the conceptual structure. Apparently, Jackendoff's proposal to reduce the semantic level to a pure conceptual one may be interpreted as a move, if not to solve, at least to circumvent the problem of the circularity inherent in the semantic analyses of the meanings of words: getting rid of a semantic level characterized by its own specificity, and resorting to a set of conceptual constituents homogeneous with perceptual and body information, should make it possible to anchor the meanings of words to a non-linguistic level. Unfortunately, Jackendoff does not provide any detailed explanation of how conceptual constituents and ontological categories originate, what mechanisms determine them, and so on, although he conceives of them as the product of mental structure and perceptual processes. Therefore, also Jackendoff's proposal, leaving us with nothing but a set of undefined words, makes us remain inside a pure linguistic dimension.

Also Evans' analysis of time does not escape circularity. For Evans, the experience of time is primarily "durational" in nature: in fact, duration constitutes the sanctioning sense associated with the lexical item *time*. Duration, in turn, is defined as an "interval": "I will define duration as the

INTERVAL holding or extending between the two boundary (beginning and ending) events" (Evans, 2004, p. 108). An interval, in turn, results from "succession": "Put another way, an interval of duration results from SUCCESSION. After all, if two events are not experienced as being successive we cannot experience duration" (Evans, 2004, p. 108). But "the notion of succession (…) derives from the phenomenon of duration" (Evans, 2004, p. 109)[11]. Circularity is thus assured (Fig. 2).

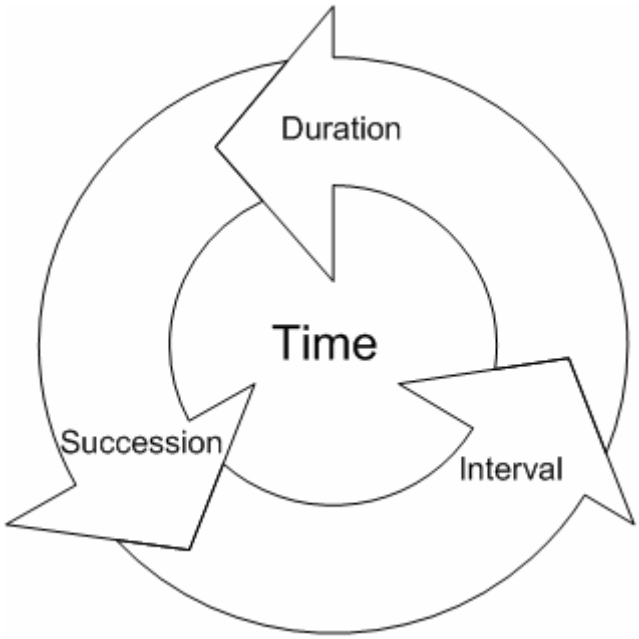

Fig. 2. The circularity in Evan's definition of time

There is no way in Evans' definition of time to get out of circularity. Time is duration, duration is an interval, an interval derives from succession, and succession derives from duration: the loop is closed. In Evans' formulation, all these concepts are so tightly entangled that is impossible to tell which one of them generates the others.

Certainly, duration is a very important aspect of the experience of time. But if one defines time as duration, one should be expected to be able to define duration independently of time. In order to define duration, Evans, on the contrary, resorts to concepts that already contain time as their constituent. The notion of "interval", for example, denotes a portion of time, something that has a "beginning" and an "end" (or an onset and an offset, in Evans; terms). But "beginning" and "end" are concepts that imply and presuppose the experience of time: in fact, to be able to speak about "beginning" and "end", one must already have experienced time.

[11] See also the following statement: "It is our awareness of and ability to assess magnitude of duration which first and foremost allows us to distinguish past from present, and thus allows us to experience events as successive. Hence, succession is a consequence of our awareness of duration" (Evans, 2004, p. 112)

Likewise, we cannot have an experience of "succession" or "sequence" without having had a more primitive experience like that of time (but also the experience of space could serve as the basis for the experiences of succession and sequence). Indeed, one can experience a succession or sequence of events only after having experienced the fact that an event follows another in time (or in space), or that events are present at different times (or places). Therefore, we can experience succession and sequence only after having had that peculiar experience that is known as "time" (or that peculiar experience known as "space").

Moreover, also the notion of duration, which Evans considers to be the sanctioning sense associated with the lexical item *time*, is not, strictly speaking, completely independent of the experience of time. Indeed, if it is certainly plausible to define time in terms of duration, it is equally plausible to define duration in terms of time. However, the experience of duration entails the experience of something that "lasts", "endures", "goes on", "continues" or "develops", and this experience necessarily requires a "beginning" event, and sometimes also an "ending" event, that is, events which have a boundary nature. But an event can assume a boundary nature only when it is seen through the glasses of temporal experience.

Evans is not able to provide an independent definition of time, that is, a definition that does not refer to experiences, concepts and notions that in their turn are based on temporal experience. He defines time resorting to concepts such as duration, interval, and succession that presuppose and imply the experience of time: the *definiens* includes the *definiendum*, in an unavoidable circularity[12].

There is, however, one occasion in which he seems to realize the necessity to resort to an independent level of explanation: precisely, when he hypothesizes that our conception of temporality may ultimately be traceable to neurologically instantiated "temporal codes" underling perceptual processing. An instance of temporal code is the "perceptual moment". A perceptual moment is a temporal interval characterized by the synchronized oscillations of neurons, which lasts for a short period of time, and is bounded by a silent interval before re-occurring. These synchronized oscillations allow information which is spatially-distributed in our brain to be correlated, thus giving rise to the correlation of sensory qualities, i.e., object perception. Therefore, the perceptual moment underpins perceptual processing and enables us to perceive. However, the perceptual moment is not only necessary for perceptual experience: it also constitutes "the cognitive antecedent of the concept of the present or now" (Evans, 2004, p. 26). Moreover, according to Evans (2004, p. 26), it would be the succession between a perceptual moment held in memory and

[12] A proposal on how to get out of this kind of circularity has been put forward by Attentional Semantics. Attentional Semantics tries to provide an a–linguistic counterpart to language by analyzing the meanings of words in terms of

the current perceptual moment that gives rise to the experience of duration. Therefore, the experience of temporality would naturally emerge from perceptual processing, with which it is so deeply entangled.

Also in this case, however, Evans is not able to avoid circularity. Ascribing (even if indirectly[13]) the origin of the experience of time to a neurologically instantiated temporal code or mechanism, Evans simply eludes the problem of giving a positive, non-linguistic definition of time, putting off its solution. What he does, actually, is to explain time through time itself. He explains temporal experience by using terms and concepts – such as neurologically instantiated "temporal" codes; "temporal" intervals; "synchronized" oscillations - that are already temporal categories, in that they contain and are built on time. Indeed, how could you explain "temporal" codes, "temporal" intervals, and "synchronized" oscillations without resorting to the concept, or the experience, of time? Instead of providing an explanation of time independent of what we already know about time, he bases his identification of the origin of the experience of time precisely on his knowledge of time: in fact, one can properly speak of "synchronization", "temporal" code and perceptual "moment" only when one already knows what time is.

Neither does Evans seem to offer or find a way out of circularity when he defines time in terms of the other lexical concepts: the moment sense, the instance sense, the event sense, the matrix sense, the agentive sense, the measurement-system sense and the commodity sense. Here, Evans' main aim is patently that of finding out and distinguishing the distinct lexical concepts associated with the lexical item time. It must be admitted that most of his analyses are very insightful and revealing, as when for example he distinguishes the matrix sense from the other senses by observing that the matrix sense is: a) something infinite, unbounded; b) a kind of backdrop against which other events occur; c) independent of events (incidentally, this is an analysis that lends itself very well to be adopted by those kinds of semantics, such as Attentional Semantics (Marchetti, 2006), which look for an operational definition of the meanings of words, rather than a pure linguistic one). It must be noticed, however, that he performs his analyses only by means of comparing the different senses, without resorting to any independent, non-linguistic level of analysis. One sense is defined by comparing it or referring it to the others, in a recursive way. Inevitably, these comparisons are always based on notions and concepts, such as "temporal", "duration", "interval", "moment", "sequence" and "event", which are not themselves defined in positive, non-linguistic terms, but

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mental operations, namely the attentional ones. These operations can in turn be traced to specific physical processes and organs (Marchetti, 2003, 2005).

[13] "I must emphasise that I am not claiming that a neurologically instantiated temporal code forms the basis of our conception of temporality. (…) However, in so far as temporal experience must ultimately derive from neurologically processes, evidence of cognitive mechanisms and processes of his kind are suggestive that temporality is internal rather than external in origin, and may ultimately be traceable to specific cognitive apparatus and processes" (Evans, 2004, p. 256).

which on the contrary refer circularly to each other. Consider for example the case in which Evans defines what distinguishes the event sense from the moment sense: "While the Moment Sense references a *temporal point* (within a particular *temporal event-sequence*), the Event Sense references an experiential point in an *event-sequence*" (Evans, 2004, p. 135) (italic is mine). As you can see, the Moment Sense refers to concepts ("temporal point", "temporal event-sequence") that in turn are temporal concepts or are concepts based on a temporal construction: that is, concepts that contain time as their main constituting element. The same can be said for the Event Sense. Consequently, Evans' analyses of the senses different from the duration one are also flawed by circularity.

On the whole, I think that Evans' work contains some very interesting proposals, such as those represented by the polysemy approach and the methodological criteria he puts forward for distinguishing between the conventional meaning associated with a word and the utterance meaning. Moreover, Evans' position regarding the importance of our mind and more in general of our body in constructing the world in which we live ("The world we experience, i.e., our perceived world, and ultimately the world to which we have conscious access, is not pre-given in the sense of being mind-independent. Rather, it is constructed by virtue of our particular evolutionary history and the nature of our embodiment", Evans, 2004, p. 43) seems to represent a good antidote to any metaphysical temptation: "there cannot be a mind-independent view of reality to which humans have direct access" (Evans, 2004, p. 50).

However, his work is still flawed by the problem of the circularity in the definitions of the meanings of words. Most probably, this is due to the strong relevance he gives to the notion of "concept" to the detriment of the notion of "meaning". Evans equates meanings with concepts: "to study linguistic meaning constitutes a study of the conceptual system" (Evans, 2004, p. 6); "language, and meaning, which it serves to express, must, on this view, be fundamentally conceptual in nature" (Evans, 2004, p. 509). Evans further specifies that concepts are mental representations, that is, information referring to experience that can be represented, modelled and recalled for purposes of reasoning, abstraction, projection, etc. even when the experience is no longer accessible to focal consciousness (Evans, 2004, p. 39). However, the move of reducing the semantic level to a pure conceptual one involves one major problem. As I have already observed above with regard to Jackendoff's work, if the notion of concept is not accompanied by an explanation of how a concept originates, what kinds of mechanisms determine it, how it works, and so on, the notion is completely useless. It is simply another linguistic way of representing and defining the meanings of words, an illusion of getting out of the linguistic level. It is true that Evans tries to generally motivate the development of conceptual structure and concept formation by means

of mechanisms such as "perceptual analysis" (Evans, 2004, pp. 51-52), and to ground this development on our experiential and bodily basis. It is also true that he himself openly admits that while language is symbolic (it pairs a physical symbol with a meaning), meanings and concepts are sub-symbolic, that is, they are not linguistic: "meanings (or lexical concepts) are not primarily linguistic, but rather derive from perceptual analysis and are hence redescribed perceptions (i.e., they are embodied). In addition, they are informed by our interaction and experience with the entities they represent, and a whole welter of other background knowledge, such as knowledge gleaned through cultural transmission" (Evans, 2004, p. 53). But it does not go any further than that. For example, he does not investigate, nor proposes any hypothesis about, what it means to build perceptual-visual information, how it is or can be built, and how it can be redescribed in "conceptual" terms; more in general, what it means to say that concepts and meanings are not linguistic, what it means, and how it is possible, to redescribe something in non-linguistic terms, which kinds of operations (mental, physical, psychological?) and which combination of these operations produce a given concept, and so on. In a word, he does not provide any a-linguistic counterpart to language and concepts. On the contrary, he remains inside a purely linguistic level of analysis and description. Consequently, his analyses cannot escape circularity.

Reducing the semantic level to a pure conceptual one also involves some other kinds of problem. Concepts are not meanings: the former differ from the latter for some important reasons. Firstly, the meaning of a word is univocal: it is valid for, and shared by, everybody, and it has to be so to safeguard the communicative function of language; on the contrary, concepts are individual: everybody can have a different concept of that to which the word refers (everyone understands what the word "freedom" means, despite the fact that everyone can have a different concept of "freedom"). Secondly, the phenomenal, conscious experience of the meaning of a word is very different from that of the concept that the meaning of the word represents (even if when I say "dog" you understand what I mean, the concept I have of a "dog" may be very different from your concept of "dog"). Thirdly, while all words have a meaning, it is not said that all words have an associated concept. Equating meanings with concepts, as Evans does, involves assigning the former the properties of the latter (and vice-versa). One of the direct consequences of this operation is that of confusing the semantic level of analysis with other levels of analysis, such as the conceptual or the pragmatic ones – a confusion which seems to be implied by the encyclopedic view put forward by Evans (2004, pp. 53-54). It is certainly true that words represent a point of access to a kind of knowledge that is usually more general and wider than that specifically and immediately transmitted by their meanings. It must be noticed, however, that one needs some time to pass from the moment in which one understands the meaning of a given word to the moment in which one can

imagine, remember or think about what that meaning may refer to. When we hear a certain word, for instance “dog”, we understand the meaning of the word almost immediately; however, we need some more time to pass from the meaning to the images, thoughts, memories or emotions (that is, what constitute our personal experience and concept we have of dogs) that may be associated with it. Usually, in normal, daily speech, we do not pass from the meaning of every word we hear to the concept or the bulk of our personal experiences it may elicit, but only for some of the words we hear. This means that meanings are processed at a different stage from that at which concepts and more in general past experiences are processed, and that concepts and experiences require a different kind of processing from that required by meanings. If it so, it seems useless and out of place to call for “the totality of knowledge we possess concerning a particular entity or experience” (Evans, 2004, p. 54) in order to analyze the meanings of words.

References

Ariel, M. (2002). "The demise of a unique concept of literal meaning". *Journal of Pragmatics: 34*, 361-402.

Benedeti, G. (2001). *Semantica operativa. La semantica in termini di operazioni mentali. Parte prima. Principi generali, metodologia e tecnica di analisi*. www.mind-consciousness-language.com.

Benedetti, G. (2005). "Basic mental operations which make up mental categories". www.mind-consciousness-language.com.

Bierwisch, M (1970). "Semantics". In Lyons, J, *New horizons in Linguistics*. Penguin Books. Harmondsworth, Middlesex.

Ceccato, S. and Zonta, B. (1980). *Linguaggio consapevolezza pensiero*. Feltrinelli. Milano.

Evans, V. (2004). *The Structure of Time. Language, meaning and temporal cognition*. John Benjamins Publishing Company. Amsterdam/Philadelphia.

Flaherty, M. (1999). *A watched pot: How we experience time*. New York University Press. New York.

Gibson, J. (1975). "Events are perceivable but time is not", In Fraser, J.T. & Lawrence, N. (eds.): *The study of time II*. Springer-Verlag. New York.

Gibson, J. (1986). *The ecological approach to visual perception*. Lawrence Erlbaum. Hillsdale, NJ.

Jackendoff, R. (1983). *Semantics and cognition*. MIT Press. Cambridge.

Jackendoff, R. (1991). *Languages of the mind*. MIT Press. Cambridge.

Lakoff, G. and Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. Basic Books. New York.

Marchetti, G. (2003). "Foundations of Attentional Semantics". www.mind-consciousness-language.com

Marchetti, G. (2005). "The importance of non-attentional operations for Attentional Semantics". www.mind-consciousness-language.com

Marchetti, G. (2006). *A criticism of Leonard Talmy's cognitive semantics.* www.mind-consciousness-language.com.

Marchetti, G. (2006) "A presentation of Attentional Semantics". *Cognitive Processing, 7*: 163-194.

Vaccarino, G. (1974). *La mente vista in operazioni*. G. D'anna. Messina-Firenze.

Violi, P. (1997). *Significato ed esperienza.* Bompiani. Milano.

Wierzbicka, A. (1996). *Semantics. Primes and Universals.* Oxford University Press. Oxford.