

## **Situated Temporal Reference: A Case for Compositional Pragmatics?**

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### *Abstract*

As Jacob Mey (2001, 2007) correctly observes, speech acts are *situated* and should be investigated only within the context of the situation in which they appear and the language in which they are issued. The object of study of pragmatic theory is a situated pragmatic act and its generalized theoretical equivalent, a *pragmeme*. In this paper I propose an analysis of temporal reference in discourse which assumes such situated acts of communication, as well as their abstract equivalents, but goes beyond that to suggest a formal compositional account of acts of communication in the framework of Default Semantics. Analogous to Mey's pragmemes, Default Semantics (henceforth DS) models abstract but situated acts of communication, referred to as the meaning intended by the Model Speaker and recovered by the Model Addressee. But DS also offers semantic representations of situated meanings, where semantic representation is understood in a contextualist way, as a truth-conditional representation that allows for the contribution of the output of pragmatic processing. Contrary to the widely assumed view, DS proposes that representations of utterances, *qua* truth-conditional representations, yield to a compositional treatment. In the first part of the paper I present a rationale for such generalized pragmatic units and demonstrate how the representations of DS instantiate them. In the second part I take the concept of situated

reference a little further and assess the plausibility of a contextualist compositional approach to utterance meaning. Next, I give an example of an application of this approach to representing temporality of utterance meaning. In the final section I address the question of the cross-linguistic application of this compositional pragmatic framework and the benefits that compositional pragmatics brings to contrastive studies of discourse.

### *1. Situated Meanings and Contextualism*

It is well acknowledged that meaning in discourse must not be approached through an analysis of speech acts alone but should incorporate nonverbal aspects of conversation as well as aspects of the situation (e.g. Mey 2001, 2007, 2008). But in order to implement this desideratum in a pragmatic theory, one has to generalize and abstract from a situation to a situation type, and from speech act to speech act type, or, better, to a generalized pragmatic act. This theoretical construct of a generalized pragmatic act is called a *pragmeme* (Mey 2001: 221). Pragmeme is a type of force of a particular pragmatic act (*pract*): it is the illocutionary and perlocutionary force combined. Mey (2008: 261) says:

‘As to pragmatic acts, they consist of two parts: an *activity part* and a *textual* one (...). In the activity part, one finds the speech acts and other, related acts (interactional, prosodic, psychological, physical, etc.), while the textual part contains the various features (tense, modality, deixis, etc.) that characterize the more or less linear sequence of linguistic units involved in the production of the pragmatic act.’

The situation of discourse has a decisive role in what has been communicated; it turns the speaker’s words into one or another pragmatic act. The linguistic content of the issued utterance is only one of several contributing factors to the communicated meaning.

This emphasis on contextual factors is equally strongly pronounced in speech-act and in Gricean pragmatic traditions. The dominant orientation in the latter (and inspired by the first) is a contextualist view – a view that the result of pragmatic inference has a legitimate place in the truth-conditional content of the utterance, or, on a more radical version, that such pragmatic enrichment or modulation is an indispensable component of establishing utterance meaning. The main rationale for including aspects of meaning of a non-linguistic provenance is the desideratum that truth conditions should be *intuitive truth conditions* and at the same time should constitute conditions for verification of the proposition against states of affairs (Recanati 2004, 2005; Travis 2006).<sup>1</sup> Clapp (2007: 251) concedes that such psychological plausibility of semantic content is incontrovertible:

‘I think that it is agreed on all sides that *if* it is a fact that P is the semantic content of S (perhaps relative to context), then this fact must be grounded in natural psychological and/or sociological facts concerning the abilities and practices of competent speakers and interpreters. If the alleged facts concerning semantic content are not somehow grounded in such natural facts, then semantics would not fit into Chomsky’s cognitive paradigm in linguistics, nor even into the broader project of “naturalizing epistemology”.’

When the truth conditions are predicated of a minimal content, they often fall short of fulfilling this requirement of psychological and sociological grounding, as (1a)-(3a) demonstrate. The glosses in brackets stand for the minimalist (as opposed to contextualist) interpretation and it is evident that they are rather counterintuitive.

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<sup>1</sup> It has to be pointed out that there are various forms of semantic minimalism which reject the requirement that truth conditions be intuitive (Borg 2004, 2007; Cappelen and Lepore 2005a, b,c), or even reject the utility of truth conditions *tout court* and restrict semantics to the output of syntax and lexicon, be it propositional or not (Bach 2004, 2006, 2007). These will not be discussed here but see e.g. Preyer and Peter (eds) 2007, and Jaszczolt forthcoming b for an overview.

- (1a) Everybody (*in some unrestricted domain, in the world*) went to see the exhibition.
- (2a) I haven't eaten (*ever in my life*).
- (3a) We will go to France or stay at home (*or both*) at Christmas.

Examples of pragmatically enriched counterparts adopted in contextualist approaches are given in (1b)-(3b).

- (1b) Everybody (*in my office*) went to see the exhibition.
- (2b) I haven't eaten (*lunch today*).
- (3b) We will go to France or stay at home (*but not both*) at Christmas.

Such enrichments often make use of the situated meanings derived from the immediate context as well as from social and cultural assumptions shared by the interlocutors. Truth conditions are then understood as a methodological tool that operates on a content that sums up, so to speak, the interaction of the lexicon, grammar, and those aspects of the pragmeme-like unit which go beyond the sentence and even beyond the speech act. Incomplete propositions that correspond to syntactically complete forms such as (4) constitute further common-sense support for such amalgams.

- (4) The book is not good enough (*to win the Man Booker Prize*).

But this is where the task really begins. While pragmemes are intuitively plausible and hardly controversial constructs for theorizing about discourse meaning, it will not suffice to stop at proclaiming that generalized pragmatic acts should be an object of study of pragmatic theory.

One has to work out next what such a theory predicts and on what methodological principles it is built. Mey chooses the option which we might call *no-formalization-in-principle*: situated meanings are situation-derived meanings *tout court* and they don't yield to a formal treatment. In what follows I would like to take a different route and suggest the *pragmatic compositionality* view for generalized, pragmeme-like units of discourse. The idea will be that the fusion of information about meaning that occurs in a pragmatic act produces a proposition-like unit which, as a methodological requirement, conforms to the principle of compositionality and as such invites formal semantic treatment.

## 2. *Pragmatic Compositionality?*

It is normally assumed that a formal approach to semantics requires adopting the assumption that sentences have truth-conditional content, while predicating truth conditions of utterances is a vague and murky speech-act approach which in principle excludes any formalization.<sup>2</sup> On the first approach, sentences may be allowed some more, or less, restricted types of pragmatic filling in but only when syntax clearly dictates them.<sup>3</sup> However, construing the dichotomy in this way is totally unfounded. While opting for semantics for minimal, sentence-like units or semantics for intuitive, pragmatically enriched propositions may be a matter of preference and free choice, equating the first with formal methods and the latter with murky, unscientific descriptive practices is illegitimate. It is true that one may focus on the role of culture and society in meaning construction, like many pragmaticists in the Continental European tradition choose to do, and in this kind of enterprise any requirement of formalization would be rather far-fetched. But when one focuses on the theoretical construct

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<sup>2</sup> See e.g. Borg (2007: 347, 354) who spells it out as a categorical dichotomy.

<sup>3</sup> 'More, or less, minimal' because the contributions allowed by the syntactic matrix range from (i) null, on Borg's version of minimalism where truth conditions are dissociated from verification against situations and hence even indexicals don't have to be filled in; through (ii) minimal on Cappelen and Lepore's (2005a) version where a restricted list of cases in which pragmatic filling in is permitted is provided; to (iii) various more liberal versions of enrichment, such as quantifier domain restriction, arguably traceable to syntactic representation (e.g. Stanley and Szabó 2000; Stanley 2000, 2002, 2005).

for a (generalized) act of communication itself, or in other words on the product of the merger of information about meaning coming from different sources, a formal compositional treatment is an open option. I have pursued this option in the theory of DS (Jaszczolt, e.g. 2005, 2007, 2009, forthcoming a) and, although a lot more research has to be done to come close to any algorithm for such merger propositions, the results obtained so far justify pursuing compositional pragmatics further.

DS identifies the sources of utterance meaning which produce such a merger proposition and these sources have been tested on a wide variety of constructions including definite descriptions, propositional attitude reports, sentential connectives, number terms, expressions of time and modality, and phenomena of presupposition and anaphora. They have also been tested on several languages, including Korean, Thai, French, Greek and English. According to the revised version of DS, the following sources contribute to the merger proposition:

- (i) world knowledge
  - (ii) word meaning and sentence structure
  - (iii) situation of discourse
  - (iv) properties of human inferential system
- and
- (v) society and culture.<sup>4</sup>

Sources (i)-(v) are responsible for an array of different *processes* that form a so-called *merged proposition*, formally represented in a *merger representation* of the pragmatic act. These processes are responsible for the construction of the main meaning of the utterance,

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<sup>4</sup> The motivation for these sources has been discussed at length in various places (e.g. Jaszczolt 2005, 2009 and forthcoming a).

called primary meaning, as well as for various secondary meanings. The primary meaning is a theoretical construct that is modelled on the theoretical constructs of what is said (Recanati 1989) and explicature (Sperber and Wilson 1986; Carston 1988) but differs from them in the significance it assigns to source (ii), word meaning and sentence structure. In other forms of contextualism truth conditions are predicated of a development of the logical form of the uttered sentence, where ‘development’ means pragmatic enrichment or some other form of modulation. In contrast, in DS, source (ii) is treated on a par with the remaining four sources, which means that its outcome can also be overridden by the outcome of those. What it means in practice is that when the speaker communicates indirectly the main, primary meaning, it is this indirect content that constitutes the content of the main communicated proposition (merged proposition) and thereby the merger representation. For example, in a situation in which academic abilities of applicants for a lectureship are discussed, the primary meaning of (5) may turn out to resemble that of (6).

- (5) Tom is always polite and well dressed.
- (6) Tom’s academic ability is not impressive.

These sources are responsible for an array of types of processes which interact during the interpretation of the utterance by the addressee. The exact mapping of the sources onto processes is developed elsewhere (Jaszczolt 2009, forthcoming a) and will not be repeated as it is not of a direct interest for the current purpose of extending pragmemes to formal compositional representations. Suffice it to say that merger representations are produced via the interaction of the processes depicted in Fig. 1. The subscripts *pm* and *sm* stand for ‘pertaining to primary meaning’ and ‘pertaining to secondary meaning’, respectively.

[insert Fig. 1 exactly here]

Such merger representations are assumed to be compositional structures. In other words, compositionality on the level of the merger is a methodological requirement in DS – an assumption which allows for pursuing the question of the interaction of the processes identified there on the level of theoretical generalizations and which has been corroborated by various applications mentioned above. By placing the requirement of compositionality on the primary intended meaning we are accommodating the interpretations which used to be considered non-compositional. For example, idioms, ironic statements, even syntactically complex metaphors, will emerge as content of compositional merger representations in virtue of this on-line interaction of the sources: no ‘literal’ meaning which is not at the same time a psychologically real stage in discourse processing has to be postulated.<sup>5</sup>

The feasibility of pragmatic compositionality is also greatly enhanced by the fact that the traditional Montagovian truth-conditional semantics, founded on Davidson’s utilization of Tarski’s Convention T and truth theory as a meaning theory for natural language, is directly applicable not only to sentences but also to utterances. The same mechanisms that are employed for the formal analysis of sentences are also applicable to speech acts, as is well demonstrated by Lepore and Ludwig (2007), and by extension to generalized acts of communication such as pragmemes or merged propositions of DS. It has to be remembered that truth conditions are a theoretical tool in the analysis of meaning which can be applied to various objects – not only to sentences, but also to acts of communication. On the latter application they appear as ‘intuitive’, contextualist truth conditions. Selecting acts of communication as their object is further justified when we observe that the condition ‘true iff  $p$ ’ must be understood according to a rather liberal sense of the correspondence theory of

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<sup>5</sup> I am grateful to an anonymous referee for prompting me to clarify this point.

truth, as correspondence *not* merely with a world relativized to time, but rather with a more pragmatic construct of a circumstance which includes the speaker, the addressee, and the situation of discourse. In their exegesis of Davidson's program of truth-theoretic semantics, Lepore and Ludwig (2007: 18) give the following definition of a compositional theory:

‘A compositional meaning theory for a language L is a formal theory that enables anyone who understands the language in which the theory is stated to understand the primitive expressions of L and the complex expressions of L on the basis of understanding the primitive ones.’

– where the set of semantic primitives consists of various categories of referring terms, properties (one-place predicates), relations (two- or more-place predicates), sentential connectives, and quantifiers. The aim of such a compositional theory is to explain the competence of language users. Now, when we understand this competence not as an I-language restricted to language faculty but rather as a higher-level system used for exchanging information, then the set of primitives has to be expanded to include some version of Gricean heuristics that make the type and amount of information dependent on the consideration of economy of processing, such as Levinson's (e.g. 2000) or Horn's (e.g. 1984) principles; the cognitive and communicative principles of relevance (e.g. Sperber and Wilson 1995); or the principles for conscious inferential and default cognitive, social and cultural contributions to the overall utterance meaning proposed in DS (see Fig. 1). Such a higher-level notion of competence is well justified in cognitive science, not only in connectionist circles. It is also justified in view of the arguments against postulating a separate language faculty which emphasize that the rules of what we call Universal Grammar are in fact rules of thought: linguistic rules as such are not represented in the mind (Devitt 2006). Analogously,

the lexicon and grammar, being only one of the sources of information about meaning (WS), need not be assumed to be the locus of compositionality.

Davidson's program can be extended to form truth-conditional pragmatics in two different ways. The first one consists of relativizing the truth predicate to the context of discourse. The other is a more radical move in which truth is predicated directly of utterances.<sup>6</sup> Contextualist approaches can be classified as utilizing the latter option.

In short, it is evident that this higher-level, pragmatic compositionality is not proposed in a void. Neither can I take all the credit for applying it to pragmeme-like units. Recanati (e.g. 2004: 132, 138) advocates an 'interactionist', 'Gestaltist' approach to compositionality and makes it a property of truth-conditional pragmatics. Even leaving the connectionist tradition to one side, there is a plethora of arguments in favour of an interactive approach to discourse processing. The provenance of these arguments is twofold. The first one is the nature of the *object* understood as a situated pragmatic act, or pragmeme, which constructs meaning (information) from a variety of available resources. The second one comes from the characteristics of the *mechanism*, the process of utterance interpretation, which is incremental and interactive, utilizing the processing of sentence structure and lexicon as well as a variety of pragmatic sources such as context-driven inference, culture- and society-driven inference, as well as default interpretations. My contribution to 'kicking compositionality up', so to speak, to the level of situated meaning lies in (i) recognizing that pragmatic compositionality applies equally to the Gricean, intention-based meanings<sub>NN</sub> and to speech acts understood as illocutionary/perlocutionary force mixes, à la Mey (2001) and making use of the insights from both traditions, and, more importantly, (ii) allowing formal methods in truth-conditional pragmatics by suggesting a compositional unit of merger representations. In what follows I

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<sup>6</sup> See Lepore and Ludwig (2007: 40-41).

briefly present one possible application of this contextualist compositional approach, to temporal reference in discourse.

### *3. An Application: Representing Temporality*

#### *3.1. Pragmatic Composition of Temporal Reference*

Referring to past, present and future eventualities (events and states) can be performed in a variety of ways, ranging from the use of lexical and grammatical markers of time, through automatically assigning salient interpretations to overtly tenseless expressions, to relying on the addressee's active, conscious inference of the temporality of the situation in the particular context. English relies predominantly on tense and temporal adverbials. Thai, on the other hand, has optional markers of tense, random use of adverbials, and relies largely on situated meanings, inferred from the shared background assumptions or assigned subconsciously as default interpretations (see Srioutai 2004, 2006; Jaszczolt and Srioutai forthcoming). Faced with significant cross-linguistic differences in conveying temporal location, the types of processes that produce merger representation identified above in Fig. 1 come as a handy theoretical tool in that various types of processes are responsible for producing the temporal meaning. When the temporal meaning is encoded, like it normally is in English, WS is responsible for the recovery of temporal reference. When it is contextually implicated,  $CPI_{pm}$  normally unambiguously retrieves it.<sup>7</sup> When it is not encoded but presumed, it gets across via CD.<sup>8</sup> For example, a Thai sentence (7) normally means (7a) but in some contexts may also

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<sup>7</sup> The *pm* subscript signals that CPI contributes to primary meaning. It is necessary because CPI can also be responsible for secondary meanings. See Fig. 1.

<sup>8</sup> See Fig. 1.

convey (7b), (7c), or (7d), as well as other temporal and modal meanings. WS and CD are responsible for producing (7a), while WS and CPI<sub>pm</sub> are responsible for (7b)-(7d).<sup>9</sup>

(7)        f<sub>3</sub>on    t<sub>1</sub>ok  
              rain    fall

(7a)        It is raining.

(7b)        It was raining.

(7c)        It is going to rain.

(7d)        It may rain.

In the remainder of Section 3, I present some examples of past-, present-, and future-time reference in English, giving the appropriate merger representations<sup>10</sup> and demonstrating the utility of a flexible, pragmatic approach to the composition of meaning. I follow up with a contrastive perspective in Section 4 by spelling out in more depth the utility of pragmatic compositionality for contrastive pragmatics, and thereby for cultural, situated acts of communication, exemplifying how cross-linguistic differences in conveying temporal reference can be captured by the processes identified in DS.

### *3.2. Merger Representations for the Past*

There are many different ways of referring to past events and states. But there is also a principle of ordering such strategies which relies on the degree to which the speaker commits herself/himself to the truth of the recounted situation. In other words, the strategies used

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<sup>9</sup> I use transliteration system from Diller 1996. Subscripts 1,2,3 and superscripts I, II used later on in example (28) stand for tone markers.

<sup>10</sup> The material in Sections 3.2-3.4 is based on the ideas from Chapter 4 of Jaszczolt 2009.

convey not only temporality but also the degree of the speaker's epistemic commitment.

Examples (8)-(13) are ordered on such a cline of decreasing epistemic commitment.

- (8) Lidia went to a concert yesterday. (*regular past*)
- (9) This is what happened yesterday. Lidia goes to a concert, meets her school friend and tells her... (*past of narration*)
- (10) Lidia would have gone to a concert (then). (*epistemic necessity past*)
- (11) Lidia must have gone to a concert (yesterday). (*epistemic necessity past*)
- (12) Lidia may have gone to a concert (yesterday). (*epistemic possibility past*)
- (13) Lidia might have gone to a concert (yesterday). (*epistemic possibility past*)

Epistemic commitment is a modal concept and this fact is particularly pertinent for the analysis of temporal reference. We follow the view that the concept of time is not primitive but instead is grounded in a more basic concept of probability understood as epistemic modality. The underlying conceptual argument is phenomenological: the human concept of time is focused on time flow and relies on the agent's memories (of the past), current experiences (for the present – including extended present for extended events and states), and anticipations (of the future; see e.g. Husserl 1928 on 'retention', 'primal impression' and 'expectation' respectively). Time is constituted by the 'flow of consciousness'. Now, memories and anticipations are reliable to various degrees: one can remember things incorrectly or imprecisely, just as one can have anticipations which are not later matched by facts. Time as a phenomenal concept, the internal consciousness of time, is fully bound by the constraints of the human mind. Although it is natural to assume that it also supervenes (i.e. depends in terms of its definitional characteristics) on real time of space-time, it is not a primitive human concept but instead lives on the concept on the finiteness of the human life;

we are born and we die, and as life goes by, we remember and anticipate, with different degrees of accuracy and success (see Heidegger 1953 on the ‘vulgar’ concepts of the past, the present, and the future).<sup>11</sup> It is this human concept that is founded on probability, and more accurately on degrees of epistemic commitment to what is represented in the mind as potential facts: anticipations, memories, current experiences. In short, the thesis adopted here, concurring with many philosophers before me, is that humans conceptualize time in terms of possibility, or, in other words, that the concept of time supervenes on the more basic concept of epistemic modality.<sup>12</sup>

Epistemic commitment allows us to discuss temporal reference as a pragmatic, functional phenomenon without being restricted by the considerations of the grammar of tense. If we had employed instead rigid categories of tense and modality, we would have had to postulate a boundary between those sentences which are modal and those which are not, and also those which use past-tense, present-tense and possibly also future-tense forms, irrespective of the pragmatic function they perform. The set in (8)-(13) flies in the face of such rigid, grammar-based distinctions. First, as the set of examples (8)-(13) indicates, the expressions of temporal reference used there form a cline of degrees of epistemic modality. And the presence of degrees is a much more interesting semantic fact than the modal/non-modal dichotomy. Second, the past of narration exemplified in (9) is clearly a form of referring to a past eventuality, in spite of assuming a Simple Present grammatical form. We will encounter more of such tense-time mismatches in discussing the ways of referring to the future in Section 3.4 and also in discussing the non-future uses of *will*, such as epistemic necessity present (Section 3.3) and dispositional necessity present (Section 3.4). Such mismatches, albeit a frequently encountered phenomenon in discourse, pose serious problems for formal approaches which derive temporal meaning from tense, to mention only Discourse

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<sup>11</sup> I present the phenomenological analysis in much more detail in my 2009, Chapter 1. I am grateful to an anonymous referee for pointing out to me the need to summarize it here.

<sup>12</sup> For other defenders of this orientation see my 2009, Chapter 2.

Representation Theory and its reliance on the ‘feature TENSE’ (Kamp and Reyle 1993: 512-513).

There is no difficulty with such mismatches and boundary-less degrees of modality for merger representations of DS and the processes identified in Fig. 1. A merger representation, for which I use the symbol  $\Sigma$  (standing for the summation of meaning information coming from various sources), sums up the output of all the processes that are active in the act of interpretation of the utterance. The epistemic commitment, which is arguably the core concept for modelling temporal reference, is represented by the operator ACC which assigns the type of modality (here: epistemic, marked by the symbol  $\vdash$ ) to the merger representation standing for the utterance content on which it operates ( $\Sigma$ ). This operator is loosely modelled on Grice’s operator of acceptability which he used in his *Aspects of Reason* (2001) in order to argue for the univocality of modals across the practical/alethic divide. It is ‘loosely modelled’ because Grice’s *Acc* operates on propositions and accounts for alethic modality as in (14), while my ACC operates on merger representations  $\Sigma$  and pertains to the ‘knowledge equivalent’, so to speak, of alethic modality, namely to epistemic commitment.<sup>13</sup>

(14)  $Acc \vdash p$       ‘it is acceptable that it is the case that  $p$ ’

Next, I add to the representation a subscript  $\Delta$  which stands for the degree of modal detachment, indexed in the representation with reference to the linguistic expression used for conveying it, such as superscripts *rp* for regular past or *epp may+pple* for epistemic

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<sup>13</sup> ACC was first introduced in Jaszczolt 2003.

possibility past.<sup>14</sup> For example, a merger representation for a possible situated act in which (8) was uttered may look as in Fig. 2, while a possible  $\Sigma$  for (12), both repeated below, is given in Fig. 3. The subscripts following the square brackets mark the type of processes that are active in deriving this part of utterance meaning.

(8) Lidia went to a concert yesterday.

*(regular past)*

[insert Fig. 2 exactly here]

(12) Lidia may have gone to a concert (yesterday).

*(epistemic possibility past)*

[insert Fig. 3 exactly here]

In sum, the main advantage of this type of representation is that situated temporal reference is faithfully depicted, unrestricted by the context-free classifications of grammatical expressions of tense.

### 3.3. Merger Representations for the Present

Merger representations for utterances with present-time reference are constructed analogously. Some examples of present-time reference are given in (15)-(19). Analogous to the examples in Section 3.2, they are arranged on a scale of speaker's decreasing epistemic

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<sup>14</sup> Epistemic possibility past can be conveyed by means of more than one modal construction (see (12) and (13)), and hence the specification of the particular modal construction is required in addition to the subscript *epp*. Hence, for example, *epp may+pple*.

commitment to the truth of the proposition. Other aspects of meaning, such as the fact that epistemic necessity past is founded on inferential evidentiality, are ignored for the present purpose.

- (15) Lidia is at a concert now.                    (*regular present*)
- (16) Lidia will be at a concert now.            (*epistemic necessity present*)
- (17) Lidia must be at a concert now.           (*epistemic necessity present*)
- (18) Lidia may be at a concert now.           (*epistemic possibility present*)
- (19) Lidia might be at a concert now.        (*epistemic possibility present*)

An utterance of (16) can be represented as in Fig. 4, where *enn* stands for epistemic necessity present.<sup>15</sup>

[insert Fig. 4 exactly here]

The standard, default ways of referring to the present such as regular present in (15) are performed through the WS and CD sources. In other words, the form *is* is normally used with present-time reference and hence acquires the CD index. On the other hand, the form *will* is not normally used with present-time reference and hence acquires the  $CPI_{pm}$  index. CPI, in conjunction with the information from sentence structure (WS), yields the present temporal reference.

### 3.4. Merger Representations for the Future

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<sup>15</sup> Or, ‘epistemic necessity *now*’, to differentiate it from *epp* for epistemic necessity past.

Examples (20)-(26) are among the most typical ways of referring to future eventualities. As before, our examples are ordered on the scale of decreasing epistemic commitment. Also, as before, some other aspects of meaning associated with temporality are ignored. For example, I do not discuss here the fact that ‘tenseless’ future and futurative progressive in (20) and (21) respectively convey the sense of planning and are incompatible with unpredictable or spontaneously occurring events or states. Neither do I discuss the evidential provenance of epistemic necessity future in (24) or the effect of the possible interaction with the progressive aspect.

- (20) Lidia goes to a concert tomorrow evening. (*‘tenseless’ future*<sup>16</sup>)
- (21) Lidia is going to a concert tomorrow evening. (*furative progressive*)
- (22) Lidia is going to go to a concert tomorrow evening. (*periphrastic future*)
- (23) Lidia will go to a concert tomorrow evening. (*regular future*)
- (24) Lidia must be going to a concert tomorrow evening. (*epistemic necessity future*)
- (25) Lidia may go to a concert tomorrow evening. (*epistemic possibility future*)
- (26) Lidia might go to a concert tomorrow evening. (*epistemic possibility future*)

‘Tenseless’ future in (20) is represented by the *tf* subscript on  $\Delta$  and the WS and  $CPI_{pm}$  indices after the square brackets which stand for the processes operating on  $ACC_{\Delta}^{tf} \vdash \Sigma'$ , as in Fig. 5.

[insert Fig. 5 exactly here]

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<sup>16</sup> The label is used after Dowty 1979.

Other examples can be represented analogously, by using a relevant set of processes that form  $\Sigma$ . Needless to say, tense-time mismatches don't end here. For example, *will* is standardly used for marking dispositional necessity present, as in (27).<sup>17</sup>

(27) Lidia will often sing in the shower. (*dispositional necessity present*)

A contextualist approach which acknowledges the fact that acts of communication owe their content to a variety of situational factors is the most adequate type of framework in which this fusion of meaning can be captured. I have demonstrated here that merger representations of DS are good candidates for representing this fusion, and thereby also good candidates for capturing the spirit of pragmemes and taking it further, into the domain of truth conditions and pragmatic compositionality. To repeat, the program is still in progress. It contains an account of the sources of information, the processes that produce the merger, and some aspects of the theory of their interaction, tested on a range of constructions and languages. The full algorithm is the task for the future but I hope to have demonstrated that it is a task which falls naturally out of the current cutting edge research on contextualism, the content and utility of language faculty, and the psychological and social grounding of the object of study of truth-theoretic analysis of meaning, understood as truth-conditional pragmatics (Recanati 2002, 2004).

#### 4. Merger Representations for Contrastive Pragmatics

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<sup>17</sup> We should also mention that the framework has no difficulty with representing the 'future in the past' as in (i) below.

(i) John Davison Rockefeller Senior started as a modest bookkeeper but *would* later found Standard Oil and become a millionaire.

The WS source is responsible for creating the grammatical context and the temporality for the first conjunct, and the on-line incremental processing completes the merger representation in this dynamic-semantic framework. I am grateful to an anonymous referee for this question.

It is not difficult to observe that different languages rely to a various extent on different strategies of expressing temporality of a situation. English verbs normally carry temporal information, time adverbials are also widely used, and very little is left open for interpretation. In Thai, overt marking of tense and aspect is optional and is often left to pragmatic inference, as was exemplified in (7). Similarly, sentence (28) can trigger any of the interpretations in (28a)-(28i).

(28)	m <sub>3</sub> ae:r <sub>3</sub> i: <sup>l</sup>	kh <sub>2</sub> ian	n <sub>3</sub> iy <sub>3</sub> ai:
	Mary	write	novel

(28a) Mary wrote a novel.

(28b) Mary was writing a novel.

(28c) Mary started writing a novel (but did not finish it).

(28d) Mary has written a novel.

(28e) Mary has been writing a novel.

(28f) Mary writes novels. / Mary is a novelist.

(28g) Mary is writing a novel.

(28h) Mary will write a novel.

(28i) Mary will be writing a novel.

adapted from Srioutai (2006: 45). A theory of meaning that relies on a close match between the grammar and the conveyed temporality would not be able to account successfully for languages like Thai.<sup>18</sup> On the contrary, a theory that recognises the fact that meaning is situated and at the same time can be subjected to generalizations and formal semantic

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<sup>18</sup> See Srioutai 2006 for a critical review of attempts to adopt for Thai grammatical categories devised for the English language.

analyses, is sufficiently flexible to represent the variety of sources and processes to which the addressee owes an unambiguous message about temporality of a state or event conveyed in the utterance. Merger representations of DS fulfil such a role and show that while in English temporal information may be conveyed via WS, in Thai it may be CD or CPI<sub>pm</sub> that facilitates it. For example, the (28a) reading of (28) can be triggered in a particular context where it is mutually assumed by the interlocutors that the speaker refers to a past event. In Fig. 6, the processes that lead to this reading are marked as word meaning and sentence structure (WS) and conscious pragmatic inference (CPI<sub>pm</sub>).

[insert Fig. 6 exactly here]

Furthermore, placing the compositionality requirement on the level of the merger ( $\Sigma$ ) rather than the grammatical structure (WS) is particularly useful in contrastive semantics and pragmatics in that it allows for demonstrating how translation equivalents owe their equivalent status to different sources and processes. To invoke example (28) again, (28) is semantically and pragmatically equivalent to different English sentences from the (28a)-(28i) list in different contexts. The lack of a direct, biunique mapping of the grammatical forms does not pose a problem in contrastive semantics and pragmatics because the intended meaning can be allocated to sources other than WS. In accordance with DS, it can then be assumed that these sources are all equally operational and equally vital in utterance interpretation as the lexicon and grammar. Faithful translation means translating the author's intentions, assumptions, rather than structure and style (Nida 1964; Gentzler 1993; de Beaugrande 1980) and the intentions can be conveyed in a variety of ways captured by the merger representation. Or, as de Beaugrande (1980: 291) says, '...the *equivalence* between a text and its translation can be neither in form nor lexical meanings, but only in the *experience*

*of text receivers.*' This pragmatic equivalence can benefit from an explanatory account in terms of pragmatic compositional representations such as merger representations.

In short, when we employ DS for contrastive studies we can assume that semantic equivalence is the equivalence of the primary meanings of Fig. 1. I call it 'semantic equivalence' to signal the equivalence of truth-conditional content but it has to be remembered that this is a contextualist account where semantics and pragmatics fuse to produce the truth-conditional content. The term 'pragmatic equivalence' can then be reserved for the cases where both primary and secondary meanings are equivalent between the L1 and L2 utterances. To repeat, these primary meanings are the result of the interaction of various sources of information and are free from what I call the mistake of a syntactic constraint which plagues other contextualist views. In other words, they allow all the sources to operate on a par rather than allocating them an ancillary role to merely adjust and alter the logical form arrived at via WS. As a result, the primary meanings of, for example, (29) and (30) may surface, in particular contexts, as (29b) and (30b) or (30c) respectively, rather than the (29a) and (30a) which stay closer to the syntactic form of the uttered sentence but are less natural or intuitive, and hence less plausible as candidates for the main communicated meanings.

(29) Child: Can I go punting?

Mother: You are too small.

(29a) The child is too small to go punting.

(29b) The child can't go punting.

(30) Situation: A little boy cuts his finger and cries.

Mother: You are not going to die.

(30a) The boy is not going to die from the cut.

(30b) There is nothing to worry about.

(30c) It's not a big deal.

To sum up so far, DS takes as its object of semantic representation the primary, salient, intended meanings and hence allows for the (29b) and (30b), (30c) interpretations to be modelled in merger representations. The representation of the primary meaning need not be isomorphic with the representation of the uttered sentence or with a development of that syntactic form. It need not constitute an enrichment/modulation of the proposition expressed in the sentence. Freeing primary meanings from the syntactic constraint conforms to the requirement of psychological plausibility (Clapp 2007 and Jaszczolt 2008) in that interlocutors frequently communicate their main intended content through a proposition which is not syntactically restricted.

##### *5. Conclusions and Future Prospects*

Contextualist approaches have no difficulty with the fact that the output of syntactic processing often leaves the meaning underdetermined. In particular, approaches which assign a duly important role to the situation, allowing it to create and not merely embellish the main, intended message, managed to free theory of meaning from the excessive reliance on the structure of the uttered sentence. In this context, Mey's pragmemes set the scene for reassessing the meaning of acts of communication by looking at them 'outside in': from the environment and situation, to what function and effect the words may achieve in this situation. DS takes this pragmatics-rich orientation a step further and demonstrates that associating theories of sentence meaning with formal methods on one hand, and theories of acts of communication with informal generalizations on the other, is unfounded.

Compositionality is best predicated of acts of communication and explained through the

interaction of various processes used by communicators. Mey's generalized pragmatic acts are in this respect conceptually analogous to merger representations, compositional structures that represent the meaning intended by the Model Speaker and recovered by Model Addressee. Such merger representations have the status of mental representations and are proposition-like, truth-conditionally evaluable constructs, integrating aspects of information that interact according to the principles established by the intentional character of discourse.

In this paper I used one example of the application of merger representations, to temporal reference in discourse. This example was selected because temporal reference is achieved by communicators in a variety of ways even within one language, and in addition it exhibits interesting cross-linguistic differences. Ascribing temporal reference to various component sources of merger representations allows for representing this diversity and in addition for capturing semantic equivalence of translation – a task which is plagued with difficulties when approached on the level of grammatical construction and lexicon alone, and with the assumption that compositionality is to be found on the level of sentence structure. Finally, I did not discuss in this paper another advantage of raising compositionality to the level of pragmatics, namely that of opening up a possibility of adequately representing intensional contexts, such as propositional attitude reports, which pose insurmountable problems in semantics. This was a task for my previous paper published in this Journal (Jaszczolt 2007) but should also be flagged here as a supporting argument for pragmatic compositionality.

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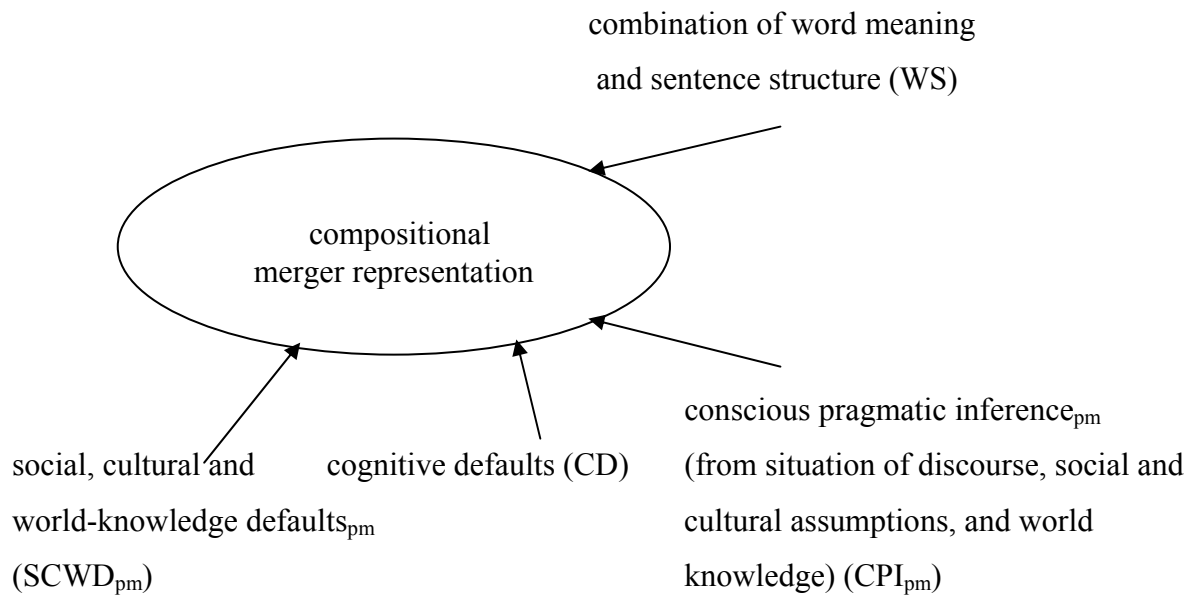
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[Figures]

*Primary meaning:*



*Secondary meanings:*

- social, cultural and world-knowledge defaults<sub>sm</sub> (SCWD<sub>sm</sub>)
- conscious pragmatic inference<sub>sm</sub> (CPI<sub>sm</sub>)

Fig. 1: Utterance interpretation according to the *processing model* of the revised version of Default Semantics (adapted from Jaszczolt 2009: 132)

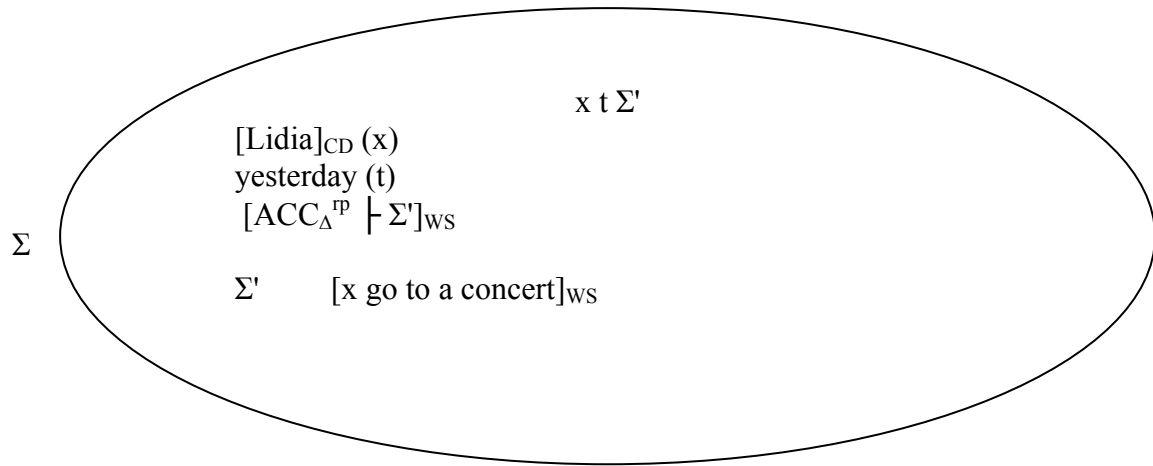


Fig. 2:  $\Sigma$  for example (8), regular past

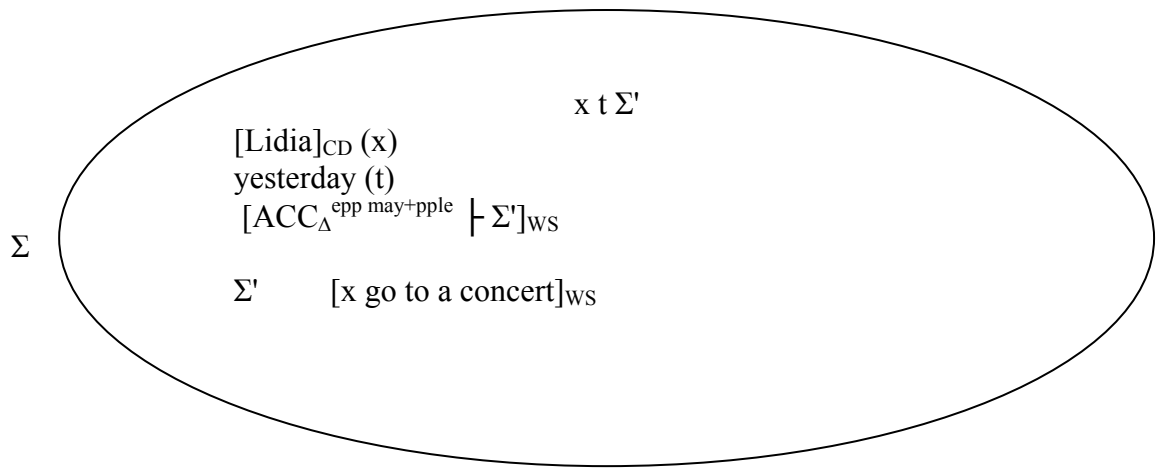


Fig. 3:  $\Sigma$  for example (12), epistemic possibility past with *may* + *Past Participle*

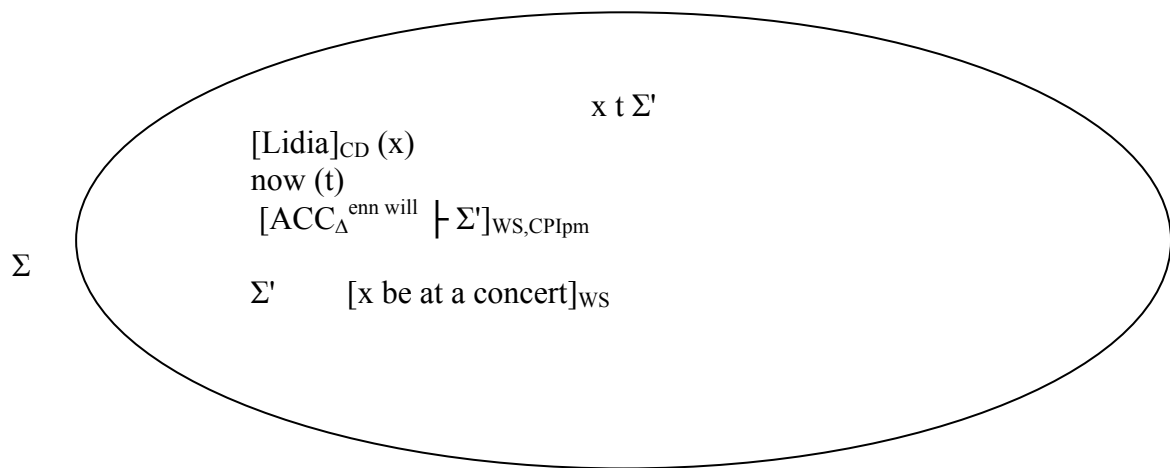


Fig. 4:  $\Sigma$  for example (16), epistemic necessity present with *will*

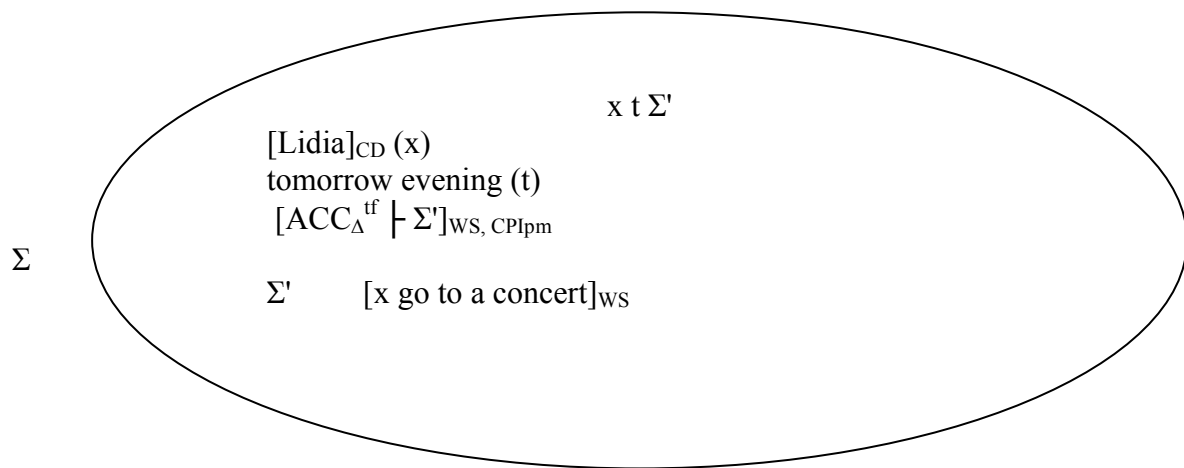


Fig. 5:  $\Sigma$  for example (20), ‘tenseless’ future

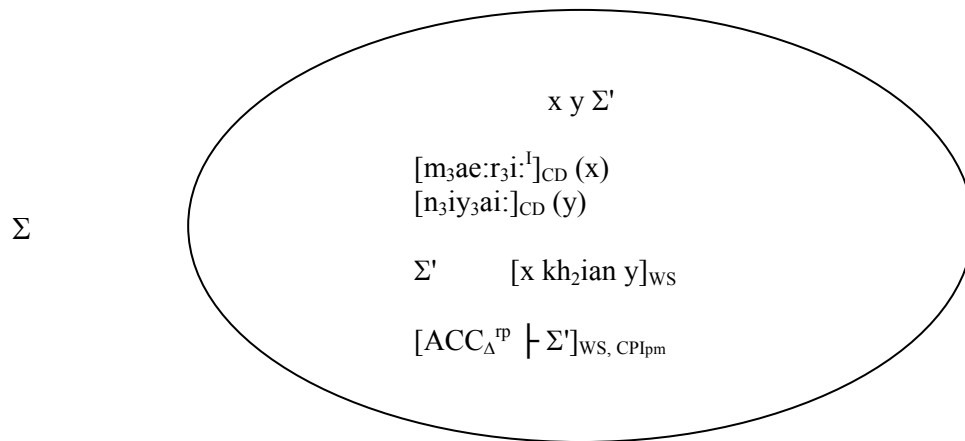


Fig. 6:  $\Sigma$  for the (28a) reading of (28), ‘Mary wrote a novel’