Cognitive Approaches to Tense, Aspect, and Epistemic Modality

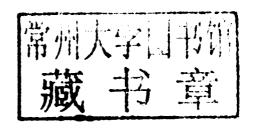*Edited by*
Adeline Patard
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Edited by Adeline Patard and Frank Brisard

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We would like to thank the authors involved for the extreme amiability and patience that they exhibited throughout this somewhat laborious project. We are much obliged to all of them, and excited that we are now able to present their work collectively as an important attempt to further the study of time and modality within the domain of grammar in a (more or less) cognitive vein.

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Frank Brisard
Adeline Patard
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Table of contents

Introduction

Cognitive approaches to tense, aspect, and epistemic modality

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1. Background

Various issues of grammatical time, including tense *and* aspect, are inextricably linked, to varying extents, with concerns of mood and modality, in particular of an epistemic nature. This is not an especially striking or new observation, given the frequent treatment of markers of tense, aspect, and mood/modality in terms of one integrated super-category, usually referred to as 'TAM' or 'TMA' and covering the three main semantic domains marked on the verb (this holds especially for studies of a typological orientation, where TAM categories are seen as pervasive in the world's languages and therefore generally considered to be universals of human language; see, e.g., Bybee *et al.* 1994, Chung & Timberlake 1985, Dahl 1985, Givón 2001). This treatment, however, is more often than not motivated on a purely formal basis, reflecting, if not the regular co-occurrence of such markers, then at least their intricate ways of interacting. At the same time, the three categories, in standard generative work, are not even supposed to be represented at the same syntactic level, thereby failing (*a priori*) to address the notional parallelisms that unite the meanings expressed by them.[1] Notably, the exclusive characterization of tenses as

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[1] In formal treatments of tense and aspect, reference is sometimes made to a modal analysis, e.g., in Dowty's (1977) work on the progressive, which is analyzed as a combined temporal/modal operator (of necessity; see also Portner 1998). Also, Hornstein (1990) deals with tenses, modals, and the perfect as having the same temporal organization. However, the conception of modality in such types of truth-conditional semantics, as a function of possible worlds, is rather far removed the more traditional way in which this category is presented in the present volume, viz., as the grammatical expression of various degrees of (un)certainty. One of the few more philosophically inspired attempts so far to see temporality in terms of epistemic modality seems to be the recent monograph by Jaszczolt (2009).

indicating (relative or absolute) location in time, i.e., as essentially temporal markers, has inspired many scholars to deal with non-temporal usage types of tense markers, which are abundant cross-linguistically, as either derived pragmatically from a more basic or 'pure' temporal semantics (i.e., to treat them as secondary meanings), or to deny the link with their temporal uses altogether and propose an account in terms of homonymy, according to which the two types of usage are semantically unconnected. The same holds, *a fortiori*, for markers of aspect, it seems.[2] Thanks to this tactic, it has been possible to preserve the age-old assumption, backed up by numerous philosophical models dealing with the relation between language and reality, that tense is *not* a psychological category dependent on the speaker's subjective choices, but rather an objective property of the world (see Ludlow in preparation for a recent overview of this discussion). At the same time, students of tense have thus largely succeeded in banning concerns of non-temporal uses from the discussion of grammatical time, arguing, quite simply, that calling a tense or aspect modal must boil down to a case of miscategorization (except perhaps in the paradigm of the future, where the link is less obviously denied).

Cognitive theories of grammar have suggested an alternative to this mainstream approach to the grammatical marking of time.[3] In Cognitive Grammar (Langacker 1991), tenses, like moods, are called 'grounding predications', because they relate a proposition to the ground or situation of speech. This relation is said to be an epistemic one, since the speaker/conceptualizer, when talking about concrete states of affairs, is primarily interested in the knowledge status that is to be assigned to them: how certain can she be of the state of affairs conjured up in a clause, and how accessible or immediate are the means to verify that status? When referring to tenses in the indicative, this status is necessarily one of certainty, meaning that the speaker presents a state of affairs as belonging to her conception of reality at the time of speaking. The idea, then, is to draw up a typology of various kinds of reality between which speakers of a given language care to distinguish. Thinking about different types of reality might appear something of a contradiction at first, but it is not different from, and basically analogous to, distinguishing different types of non-reality (possibility, probability, counterfactuality, etc.). For instance, the use of a simple present in English to refer to an unqualified or

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2.   This is so despite various hints in the past regarding the systematic nature of the link between certain aspectual and modal categories (Fleischman 1995, on the connotations of non-reality associated with past imperfectives, is a classic example in this respect; cf. also Barceló and Bres 2006, James 1982, Martin 1991, Mellet 1990, and Patard 2007; for general past-time reference and modality, see Dahl 1997, Fleischman 1989, Hogeweg 2009, Iatridou 2000, Larreya 2003).

3.   Not only cognitive approaches present such an alternative. For instance, the French enunciativist tradition treats tense as a linguistic category that touches upon the speaker's subjectivity by definition.

immediate reality (either a constant state or a dynamic process construed generi-
cally or habitually) represents another type of reality than with that of a present
progressive, which bestows more of an incidental or contingent character upon an
(equally real, but qualified) situation. This interaction between tense and aspect
may be said to affect the whole of the (English) tense system, and part of the work
cut out for those less formally inspired accounts included in the present volume
consists precisely in uncovering such differences, which more often than not go
beyond the strictly temporal characteristics ascribed to tense and aspect catego-
ries. Not much of that has been done yet, it should be noted, though in the wake of
Cognitive Grammar a definite start appears to have been taken in the more recent
past (see the contributions on TAM in Brisard 2002a and Boogaart & Janssen 2007
for an overview). Relevant studies undertaken in both mental-space theory
(e.g., Cutrer 1994, Doiz-Bienzobas 1995) and Construction Grammar (e.g., Mi-
chaelis 2004, Croft in preparation) follow up on some of the leads proposed by the
discussion of grounding in Cognitive Grammar, or come up with their own func-
tional explanations. More generally, linguists (e.g., in the French tradition) are be-
ginning to grasp the complex interconnections between the domains of tense, as-
pect, and modality, both at the level of grammar and at that of discourse
(see Abraham & Leiss 2008, Barceló *et al.* 2006, Condoravdi 2002, Declerck 2005,
Gosselin 2005, Stowell 2004, and Trnavac 2006).

Not all contributions in this volume are strictly to be situated within the theo-
ry of Cognitive Grammar, or even within the wider paradigm of cognitive linguis-
tics. However, all of them do subscribe to the view that the choice of grammatical
markers of time is motivated by semantic factors. Moreover, these studies also, to
varying degrees, present an explicit attempt to unify the different usage types char-
acterizing a particular (set of) construction(s), which is an important point of
methodology in the analysis of tense and aspect semantics. In passing, most of the
present contributions comment on issues of subjectivity linked with the descrip-
tion of these markers, which ties in neatly with the more general usage-based per-
spective suggesting that elements of grammar develop out of, and should therefore
be seen as, subjectified or speaker-oriented uses of linguistic constructions.

2.   Overview of the contributions

A first set of chapters, presented in Part I, deals with some fundamental issues in
thinking about modality, and how it relates to (the grammatical marking of) tem-
porality. First, Declerck proposes a model that accounts for modality as a notional
category and its expression in English, among other means, through the use of
modal auxiliaries. In the second chapter, Langacker addresses the contrasting

modal values of 'epistemic immediacy' and 'epistemic contingency', suggested by Brisard (2001, 2002c, 2005) to describe the meanings of the two English present tenses (simple and progressive). In the third chapter, Smirnova presents a systematic discussion of temporal and modal grounding in German, which turns out to be quite different from the English system. And in the final chapter of Part I, Temürcü takes up the connection between epistemic immediacy vs. contingency and grammatical present-time reference again, and confronts it with the meaning of the 'present continuous' marker in Turkish. He describes and analyzes this meaning within the framework of his own model of 'anchoring relations', which exhibits an explicitly cognitive orientation while at the same time challenging the assumption, entertained by students in Cognitive Grammar, that all grounding predications have an epistemic and thus modal, rather than temporal, core meaning.

To begin with, **Renaat Declerck** makes a distinction in his contribution, "The definition of modality", between different types of world: the 'factual word' comprises all the situations that are actualizing at S (the speech time) or have actualized before S, a 'counterfactual world' is a world distinct from the factual world, and a 'nonfactual world' or 'theoretical world' is a possible world that is not interpreted as being the factual world. He suggests a comprehensive and concrete definition of modality according to which a situation 'is represented as actualizing in a nonfactual world'. Four modalizing devices are observed in English. The first two mechanisms rely on the marked use of a verbal tense instead of the unmarked form so as to produce a tentative or counterfactual interpretation: 'modal backshifting' consists in using one or more backshifting form(s) (past and/or perfect tense), and modal conditionalization concerns the use of a conditional rather than a present tense in a non-conditional context. Declerck accounts for the category of 'nonneutral theoretical' conditionals, i.e., non-factual conditionals that denote a specific link between the suppositional world expressed and the factual world. This link can be of four different types: closed, open, tentative, or counterfactual, ranging from a full coincidence with the factual world to an asserted divergence from it. Finally, the notion of 'not-yet-factual at *t*' is introduced, characterizing a world that is non-factual/modal at the time in which it is anchored. Declerck further defines the notions of epistemic modality and root modality. Epistemic modality is claimed to establish an 'epistemic relation', i.e., a degree of compatibility between the modal world and the factual world. This epistemic relation can be left indeterminate, e.g., in imaginary worlds, or it can be specified and assigned a factuality value. To account for the meaning of English modal auxiliaries (and conditionals), Declerck outlines an epistemic scale of factuality values ranging from 'factual' to 'counterfactual'. Root modality, on the other hand, is concerned with 'factors that determine the actualization of a [...] situation in a nonfactual world'. Contrary to epistemic modality, root modality does not imply any epistemic

relation, but a 'modal position' assumed by the speaker as regards the conditions of a situation's actualization. By way of conclusion, Declerck looks at 'world-evoking' lexical verbs and identifies three types of them: 'factive verbs' (e.g., *know*), which automatically refer to a factual world, 'intensional verbs' (e.g., *believe*), which create a specified epistemic modal world, and 'attitudinal verbs' (e.g., *intend*), evoking a root modal world.

The chapter by **Ronald W. Langacker**, "The English present: Temporal coincidence vs. epistemic immediacy", tackles the question of whether the English (simple) 'present tense' is best described as marking tense or modality. Langacker confronts his account of the English present tense as indicating temporal coincidence with the time of speaking (Langacker 1991, 2001) with Brisard's analysis (2001, 2002c, 2005) in terms of 'epistemic immediacy'. He first tackles the puzzle of present perfectives in English: in the present, perfective processes are compatible with the progressive construction but not with the simple present (at least if they are to indicate actual coincidence with the present), whereas, in the domain of the past, they can occur with both. The problem is viewed as conceptual (i.e., semantic), with both a durational and an epistemic component: canonically, dynamic events (typically short changes of state, like kicking a ball) cannot both be observed and reported at exactly the same time, and thus do not fall under Langacker's definition of the English present tense as indicating 'full and exact coincidence with the time of speaking'. This is so because the time it takes to linguistically report a token event, like kicking a ball, is rarely coextensive with the event itself (durational) and/or the starting point of the event rarely coincides with the moment of its recognition (epistemic) as a type of event, like the 'kicking a ball' type – unless, of course, the event in question is in some sense predictable or stereotypical (as with habituals and play-by-play sporting reports, for instance) or is by definition coincident with the speech event (as with performatives). Langacker also examines some non-present uses of the present tense: the 'historical present', the present of 'scheduled future' and in singular generics. To explain them, he suggests a special viewing arrangement in which the event coincident with the time of speaking is not the actual 'represented event', but a virtual (or mental) 'representing event' through which the actual process is apprehended. Next, Langacker considers an epistemic account of the present tense in the line of Brisard's proposal, reinterpreting the semantic contrast in English between the present tense and the past tense as expressing the inclusion of the designated process in the immediate or non-immediate reality of a speaker/conceptualizer. This explicitly modal conception allows him to explain the present perfective puzzle and the non-present uses of the present tense, as well as the combination of the past tense with modals (*might*, *would* etc.) to refer to present situations, typically in a more mitigated way. These past modals are shown to indicate that the reality at issue, as the basis of a

proposition's modal assessment, is 'non-immediate', i.e., distinct from that of the current speaker: it might, as with past-tense conditionals for instance, involve an imagined or virtual conception of an alternative immediate reality, differing only slightly from the speaker's actual one, viz., in the premises contained by the protasis. Given that the so-called tense marking (past or present) in such cases does not apply to the proposition itself but to the status of the modal assessment, where temporal location is relatively irrelevant, Langacker concludes that 'epistemic immediacy' more adequately describes the schematic meaning of the English present tense, including on modals, and that 'temporal coincidence' corresponds rather to its prototypical value.

In "The organization of the German clausal grounding system", **Elena Smirnova** presents a systematic discussion of temporal and modal grounding in German, which for one turns out quite different from the English system. Smirnova starts by discussing the notion of grounding, developed in Cognitive Grammar, as a specific case of deixis or indexicality. She underlines the necessarily relational nature of deictic signs in general, and of grounding predications in particular. Three basic components are suggested in the characterization of grounding predications: (i) the nature of the grounded entity (nominal/clausal) that is related to the ground, as an immanent reference point, (ii) the nature of the grounding relation itself, yielding different concrete grounding values or meanings, and (iii) the different conceptualizations of, or viewing arrangements on, the ground. Smirnova proposes to focus on the third aspect and argues for the possibility of having two alternative deictic construals of the ground. In the default construal, the speaker and the hearer are identified as a *common deictic center*. The epistemic region that does not coincide with this ground and is thus non-immediate or distal corresponds to a third party. In the second configuration, the ground is construed as a *speaker-exclusive deictic center*, excluding the hearer. In this case, the distal epistemic region also comprises the position of the hearer. The contrast is then applied to the German grounding predications, starting with temporal expressions. According to Smirnova, this system is marked in German by the opposition between the present tense, which situates the profiled event is in the temporal region of the ground, and the past tense, locating the profiled event outside of this region. As for the ground, its construal configuration is characterized by the adoption of a temporal vantage point shared by both the speaker and the hearer (*common deictic center*). Next, Smirnova deals with the modal grounding system of German, which is founded on the opposition between the indicative and the subjunctive mood. She posits that all indicative markers situate the profiled event within the realm of reality, whereas subjunctive marking locates the profiled event outside of reality. It is further assumed that the present and the preterit subjunctive entail different construal configurations of the ground. The preterit subjunctive is argued to relate

the profiled event to the *common deictic center*, thus locating it outside of the reality shared by the speaker and hearer. In comparison, the present subjunctive relates the profiled event to the *speaker-exclusive deictic center* and consequently situates the event in a region outside of the speaker's reality, but which may include the hearer's reality. Finally, epistemic uses of the German modals are claimed to constitute an altogether different sub-system from that of German mood: they situate the profiled event in various spheres of (the speaker's) knowledge of reality, and allow for only one configuration of the ground construed as a *speaker-exclusive deictic center*.

The last chapter, by **Ceyhan Temürcü**, on "Grounding in terms of anchoring relations: Epistemic values of 'present continuous' marking in Turkish" explores the association between present-time reference and the evidential category of 'new information' (also known as 'immediate meaning' (Nichols 1986) or 'mirativity' (DeLancey 1997, 2001)). In particular, Temürcü examines the epistemic interpretations of the 'continuous aspect' marker *-Iyor* in Turkish (when used as the only TAM marker on the verb). For the sake of the analysis, he has developed his own theoretical framework of 'anchoring relations', inspired both by Cognitive Grammar's conceptual account of 'grounding relations' and by semantic versions of Functional Grammar that deal with 'underlying clause structure'. He expands on the concept of 'grounding' (see, among others, Langacker 1991, 1997, 2002; Brisard 2002b, c) and proposes a set of anchoring relations that are purely semantic in nature and that account for the use of tense, aspect and mood markers in utterances of natural languages. They involve epistemic but also aspecto-temporal categories and, moreover, each of the meanings of so-called grounding predications is decomposed using temporal, epistemic, and volitional 'building blocks'. Temürcü then gives a comprehensive description of the temporal (present continuous or restricted habitual) and epistemic ('certainty' or 'new information') uses of Turkish *-Iyor*. He notices that this marker typically serves to convey epistemic contingency, i.e., "to express information incidental to a certain knowledge state (that of the speaker at the time of utterance or a displaced epistemic center)". Temürcü departs from Brisard's (2005) analysis of the English present progressive, semantically a close counterpart of the *-Iyor* form. Indeed, he adopts a 'family resemblance' conception of the polysemy of *-Iyor*, and, accordingly, does not derive its temporal uses from a more modal 'schematic meaning' in terms of epistemic contingency. Instead, he posits a pragmatic relation of metonymy, whereby epistemic contingency most frequently (but not necessarily) arises within the same conditions of use as present-time reference. By way of conclusion, epistemic contingency is identified as a sufficient condition for the use of *-Iyor* in many temporal contexts: it is what remains after a process of subjectification turns a marker of present-progressive aspect into one with persistent perfect, future, and habitual-gnomic values.

Part II contains applications of the grounding model proposed in Cognitive Grammar to deal with the meanings of particular tense and mood/modal markers in various languages. The study by Smirnova & Mortelmans argues for a modal characterization of verb forms in German, suggesting specific 'construal configurations' triggered by the context. Stanojević & Geld investigate the 'aorist' in Croatian, applying the notion of 'epistemic immediacy' to the domain of past-time reference. And in his chapter, Zanned analyzes aspectual categories in Arabic (the inflectional indication of perfective/past vs. imperfective/present, but also derivational, syntactic, and lexical marking) against the background of cognitive psychology.

The chapter by **Elena Smirnova** & **Tanja Mortelmans**, "Some remarks on the role of the reference point in the construal configuration of 'more' and 'less' grounding predications", investigates the different degrees of grounding and subjectification exhibited by the German construction *würde* + infinitive in its different uses. In Cognitive Grammar, a 'grounding predication' relates a profiled/designated entity to the ground or situation of speech, thus locating it in a specific epistemic region (e.g. 'immediate reality'; cf. above). Following Mortelmans (2002, 2006), a gradual view on grounding and on subjectification is proposed. Smirnova & Mortelmans suggest the grammatical relevance of positing intermediate stages between objective construals, which imply no relation to the ground or where that relation is effected in an explicit manner, and subjective construals. They assume that such intermediate configurations can be described by adding a *relevant* reference point that cannot automatically be equated with the ground or the clausal subject, and that this reference point can be inferred via information present in the surrounding context. This criterion, indicative of an intermediate degree of grounding and subjectification, is tested against the German construction *würde* + infinitive, which is compared to the preterit subjunctive and the construction *werden* + infinitive. The preterit subjunctive is argued by Smirnova & Mortelmans to be a grounding predication that locates the profiled situation outside of reality. For them, it involves a 'true' grounding relation since it construes the ground as the only relevant reference point to which the profiled situation is linked. However, according to Smirnova & Mortelmans *werden* + infinitive has only acquired an intermediate degree of grounding and subjectification. Indeed, they demonstrate that, for *werden* + infinitive to be interpreted in an unambiguous way (as either future or epistemic), it always requires an additional reference point that cannot coincide with the ground. As for *würde* + infinitive, this construction is analyzed, in line with Smirnova (2006), as a polysemous construction that may function either as an analytical alternative to the synthetic preterit subjunctive or as the preterit counterpart of the indicative construction *werden* + infinitive. Once again, these two variants show different degrees of grounding and subjectification.