Introduction

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1.1 Background and scope*

Modality is a core research topic for most disciplines interested in language, including linguistics, philosophy, and psychology. Modal expressions are the features of language that make it possible to displace our conversations from actual circumstances to non-actual situations. The ability to construct and understand modal sentences underlies our capacity to discuss and reason about what is possible, obligatory, desirable or prohibited, a defining characteristic of human communication.

Modality has been a traditional area of research in the study of language, but focus has been placed on sentence-level modality. Adopting a more general perspective, this book

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examines the construction of modal meanings across a range of syntactic categories in addition to the sentential type. The study of modal meanings across a range of syntactic categories opens new windows both on the role of syntactic structure in the organization of modal meanings and on the formal linguistic characterization of non-actual possibilities.

Drawing on novel data from an extensive set of Indoeuropean and non-Indoeuropean languages, including many that lack traditional descriptions, the chapters in this volume offer a cross-linguistic perspective on the encoding of modal meanings. By putting forward specific case studies across a range of languages, the chapters in this book allow us to gain insights into features that are common across languages in the construction of modal meanings, as well as constraints that are language-specific. The broad range of syntactic and morphological configurations under study in this book succeed in giving readers a sense of the extremely rich diversity found in natural language under the ‘modal umbrella’.

Traditional semantic accounts of modality have often been inspired by logic and philosophy. Very often based on the grammar of Germanic languages, such accounts commonly assume that very specialized linguistic elements are responsible for constructing modal meanings. Such elements are often thought to be located in a fixed syntactic position within the sentence, roughly above temporal projections associated with tense and aspect within the clause. There also appears to be a common underlying assumption that there is a basic dichotomy between the types of meanings that we might consider ‘modal’ and other kinds. Recent research, however, casts doubt on these restrictive views. On the one hand, there is a growing body of cross-linguistic evidence based on a larger variety of language families that suggests that modal meanings arise in a very broad set of syntactic contexts, and not simply in fixed positions within the clause. On the other hand, recent theoretical
proposals have developed highly articulated relations between syntax and interpretation and a more fine-grained modal ontology, including situations, events, facts and information states, which lead to the prediction that modal meanings could be available for all syntactic categories and at all the different levels of syntactic structure. In principle, all categories that manipulate individuals, events, and situations would be able to access non-actual possibilities. This raises the chance that modality could be encoded in rather ‘unexpected’ places, that is, in a broader range of constructions and associated with a larger set of categories than contemplated in past philosophical, logical, and grammatical traditions.

There exists a tradition of studies about the relation between types of modality and syntactic structure in some languages, most notably relating to (English) modals. Given more recent perspectives, however, the question becomes fully general, opening the door to research regarding restrictions on modality across multiple syntactic categories. The issue of the availability of modal meanings across different structures, and of the modal ‘flavours’ associated with different structures, has thus become a live empirical question. The chapters in the current volume support a view that considers that modality may infuse a much more extensive number of syntactic domains than traditionally thought. The eleven chapters have as unifying theme a cross-categorial perspective where modal meanings are related to varied syntactic categories and levels of syntactic structure. The book has been organized in terms of three main cartographic configurations: (i) LOW modality refers to modality as it appears embedded in the verbal and nominal domains (i.e. roughly in structures dominated by VP or NP). Modality at this level has remained relatively understudied in the traditional literature but constitutes a lively current area of research and the most extensive area of research under investigation in this volume. (ii) MIDDLE modality refers to modality structurally linked to tense and aspect (i.e. roughly in the central areas of the structure of the sentence commonly
known as the inflectional layers). (iii) HIGH modality refers to modality as it appears above
the domain of tense and aspect taking widest interpretative scope (i.e. roughly in the highest
portions of the clause associated with complementizers and related syntactic categories).

The following twelve chapters are concerned with the interpretation of modal items
in the verbal and nominal cartographies, in the cartography internal to the clause, and in the
cartography that has come to be known as the left periphery. They offer enticing
combinations of cross-linguistic discussions on traditional sources together with novel or
unexpected sources of modality, spelling out specific case-studies that show how meanings
associated with low, middle, and high modality crystallize in a variety of languages.

1.2 The case of ‘low’ modality

As stated above, traditional studies of modality have mostly focused on languages such as
English or German, in which modal meanings are often conveyed by means of operators
that appear in the inflectional domain of the clause. This section shifts the focus to modal
meanings that are constructed ‘lower’ in the clause, namely both in the domain of nouns and
of verbs across a range of languages from both synchronic and diachronic perspectives. For
the purpose of this introduction, we have separated this group in two parts: modality in the
nominal domain and modality in the verbal domain.

1.2.1 Modality in the nominal domain

The authors grouped together under the above heading address challenges posed by
modality in the nominal domain. How are modal meanings generated in structures that do
not have the complexity of full clauses or even verbal projections? The chapters explore the construction of epistemic effects in the absence of traditional epistemic modals, parameters of cross-linguistic variation in such interpretations, as well as the introduction of conditional meanings within the noun phrase.

In the chapter “Epistemic indefinites: on the content and distribution of the epistemic component”, Alonso-Ovalle and Menéndez-Benito investigate the nature of the ignorance effects triggered by so-called epistemic indefinites, as well as their distribution. They compare two approaches to epistemic effects in indefinites: those in terms of ‘conceptual covers’ and those in terms of implicatures. Alonso-Ovalle and Menéndez-Benito note that the content and distribution of epistemic effects actually pose challenges to both types of accounts. They propose a reconciliation of the two views by maintaining an implicature-style account of epistemic effects generated on the basis of competition between the maxims of quantity and quality, while at the same time enriching the original implicatures based proposal. This allows constraints on the properties that identify domains of quantification to play a role, reconstructing insights from approaches in terms of conceptual covers.

Luis Alonso-Ovalle and Junko Shimoyama’s paper, “Modal indefinites: where do Japanese wh-ka fit in?” explores modality in Japanese indeterminates that are constructed with a wh-word and the -ka particle. In other languages, so called ‘epistemic indefinites’ have been shown to convey a range of effects, including different types of speaker ignorance such as type vs. token, “free choice” readings under the scope of deontic modals, and implicature-style behavior in downward entailing contexts. Alonso-Ovalle and Shimoyama provide a comparative overview of Japanese wh-ka indeterminates contrasting them with
expressions found in other languages, and contribute towards a general theory of nominal modality by tracking their behavior with respect to relevant parameters of variation.

In “Modality in the nominal domain: The case of adnominal conditionals”, Ilaria Frana investigates the interpretation of *if*-clauses associated with NPs known as ‘Adnominal Conditionals’ (ACs), which include *The price if you pay now is predictable* and *No possible explanation to Telepathy if you believe in the laws of Physics exists*. ACs provide an interesting window into the parallelism between modality in the nominal and sentential domains. Frana pursues an analysis that highlights this parallelism by proposing a compositional analysis that builds on restrictor-style proposals for sentence-level *if*-clauses commonly accepted in the literature. Frana provides a unified account that can address both ACs with overt modal adjectives such as *possibly*, and cases which are implicitly modalized with a covert operator similar to *necessary*, solving problems for earlier proposals.

### 1.2.2 Modality in the verbal domain

The authors discussed in this section focus on the interpretation of lexical verbs that carry modal interpretations, in particular those signaling desires, hopes, the speaker’s beliefs, or planned events. The chapters show that the boundary between true ‘modals’ and other types of verbs can become rather blurred, while at the same time there appear to be distinctions that differentiate between modality at the level of lexical verbs vs. more traditional modals.

In “The non-modality of opinion verbs”, David-Étienne Bouchard establishes a comparison between opinion verbs such as *find (that)* and epistemic verbs such as *think*, arguing that in spite of similarities in their meanings, their underlying semantics is fundamentally different. Bouchard’s paper offers insights into the diverse mechanisms that
construct modally-flavored interpretations, making a distinction between the systems that manipulate a judge parameter as, for example, in predicates of personal taste and opinion verbs, and semantic mechanisms that construct modal interpretations by quantifying over possible worlds, as with epistemic modals and epistemic verbs. By arguing for the separation of the two systems and studying their interaction, Bouchard’s chapter furthers our understanding of the multiplicity of parameters that contribute towards the construction of subjectivity in language.

In the chapter “Sublexical modality in defeasible causative verbs” Fabienne Martin and Florian Schäfer investigate a class of verbs they dub ‘defeasible causatives’ (which includes *offer*-type verbs), offering a typological study with empirical focus on French and German. They note that with agentive subjects, defeasible causative verbs give rise to the intuition that there was an intention to bring about a change of state, but it is not given that such a change was in fact brought about. With causative subjects, however, the change of state is implicated much more strongly (maybe entailed). Martin and Schäfer contribute towards our understanding of modality at the sub-lexical level by providing an analysis of these verbs according to which, in addition to a situational core component (pertaining to arguments and event structure), there is a sublexical modal component that identifies the world evaluation indices in terms of ‘causally successful worlds’. By enriching lexical representations with a modal dimension, Martin and Schäfer argue for a more complex view of verb meanings that incorporates a richer range of modal interpretations.

In “Straddling the line between attitude verbs and necessity modals”, Aynat Rubinstein examines the expression of desires and goals in attitude verbs and modals, thus probing into the semantic and syntactic characterization of modality across these categories. Challenging previous accounts based on sets of alternatives, Rubinstein develops a
characterization of *want*-type verbs in terms of comparisons based on desires that simply take into account the prejacent and its negation. Rubinstein then goes on to propose that *necessary* as prototypical means to express necessity is a teleological modal, differing from *want* in lacking an individual ('subject') argument. Requiring a teleological ordering source to determine its quantification domain, *necessary* is also argued to differ from general-purpose necessity modals such as *have to*. The claim is that there is a continuum between *want*-type attitude verbs and general purpose necessity modals, with modals like *necessary* occupying a middle ground. The paper thus makes a contribution towards our understanding of the relation between structural configurations and the construction of modal meanings. Namely, while *want*-type attitude verbs and *necessary*-type modals differ with respect to the relativization of modality to an individual, they share common semantic features that can be grouped under a ‘teleological’ interpretation, and differ from modals like *have to*, which display greater interpretative flexibility.

In the chapter “*May* under verbs of hoping: Evolution of the modal system in the complements of hoping verbs hoping in Early Modern English”, Igor Yanovich investigates the historical development of modals in the scope of verbs of hoping. Yanovich notes that the usual meaning of possibility associated with modal verbs such as *may* appears to be absent in this context and argues that the role of *may* was to take over the functions from the disappearing subjunctive. Yanovich makes this point tracing the development of modals in the scope of *hoping*-verbs, from Old English in which such modals were completely absent, until Modern English, in which the construction became more common and acquired its unexpected interpretation. By examining the development of the interpretation of *may* in this particular context, Yanovich makes a contribution to our understanding of how modal
interpretations may be affected by the modal values of other elements in the structure. In this case, the compositional interpretation disappears as other functions are taken on.

1.3 MIDDLE modality

This section investigates the construction of modal meanings in relation to tense and aspect. Even though traditional classifications have separated tense and aspect from modality, a growing body of evidence suggests that ‘temporal’ categories also have modal components. Research in this area has often focused on a specific language, obscuring the range of variation that can lead to the construction of modal interpretations. This section of the volume includes considerable cross-linguistic data arguing to the effect there is no one to one correspondence between flavours of modality and tense/aspect configurations.

Bronwyn Bjorkman and Claire Halpert’s chapter “In an imperfect world: Deriving the typology of counterfactual marking” examines the interpretation of counterfactual conditionals from a cross-linguistic perspective, making a contribution towards lively current debates regarding the interpretation of temporal morphology in this environment. Examining in detail a wide range of languages not widely discussed in the previous literature, Bjorkman and Halpert argue for a novel typology for marking counterfactuality. Some languages appeal to past tense as a marker of counterfactuality, giving rise to ‘fake tense’ interpretations, while other languages require imperfective aspect as a marker of counterfactuality, giving rise to ‘fake aspect’ interpretations. Crucially, argue Bjorkman and Halpert, no language requires both. The authors suggest that this may indicate that there is a single dedicated syntactic position associated specifically with the semantic composition of
counterfactual conditionals, and explore its relation with the interpretation of temporal morphology.

In his chapter, “Dimensions of variation in Old English Modals”, Remus Gergel examines the morphosyntax and semantics of modal verbs in Old English in relation to their categorical status, modal flavor and force, as well as their ability to give rise to actuality entailments. Gergel departs from standard assumptions in arguing that Old English modals were already functional elements at the height of Aspect, thus locating them within the inflectional domain. By examining differences in modal flavor and quantificational force, Gergel shows that the system of modals in Old English displayed a broad range of variation, arguing against a strict link between a specific type of interpretation and a specific type of complementation structure. The chapter thus makes a contribution not only to the diachronic study of semantics but also to our understanding of the interaction between syntactic structure and modal interpretation.

1.4 HIGH Modality

This section of the book investigates modal meanings that have traditionally been associated with elements located high in the left periphery of the clause. Such syntactic positions are often associated with epistemic and evidential types of meanings, and have been said to host ‘pragmatic’ operators (e.g. encoding illocutionary force). The chapters in this section explore how epistemic/evidential/non-declarative meanings may be constructed, arguing for more flexible approaches than those often found in the existing literature. The consensus seems to be that nothing very special needs to be said about the construction of ‘high’ modal meanings: we observe the expected interaction with other operators in the clause and we are
able to account for observed interpretations without ad-hoc operators.

In “Past possibility cross-linguistically: Evidence from 12 languages”, Chen, Hohaus, Laturnus, Louie, Matthewson, Rullmann, Simchen, Turner and Vander Klok investigate the interaction between modality and temporal operators across languages from seven language families. The authors provide support for the view that temporal operators scoping above modals are responsible for the modal’s temporal perspective while temporal operators scoping below the modal give it its temporal orientation. In many cases, the temporal operator scoping above the modal is tense, and the one below is aspect, but the authors show that there is cross-linguistic variation arising from differences in temporal systems found across languages. Importantly, the authors point to robust cross-linguistic evidence showing that the temporal perspective of epistemic modals may be shifted towards the past, thus contributing to ongoing debates regarding the temporal anchoring of epistemic markers.

Von Fintel and Iatridou’s chapter “A modest proposal for the meaning of imperatives” provides a novel perspective on the compositional interpretation of imperatives, evaluating the roles played by semantics and pragmatics. Contrary to views that analyze illocutionary force in terms of operators scoping high on the inflectional domain, von Fintel and Iatridou account for the interpretation of imperatives on the basis of a minimal semantics together with a sophisticated account of pragmatic force. von Fintel and Iatridou’s chapter brings a wide range of data to bear on the discussion, contemplating the puzzles arising from ‘non canonical’ uses of imperatives, such as conditional conjunctions and imperatives that signal acquiescence and indifference, across a large set of languages.

In “Aspect and Tense in Evidentials”, Arregui, Rivero and Salanova investigate the interaction between evidential and temporal categories, establishing a comparison between
Bulgarian, a South Slavic language, Mẽbengokre, a Jê language in Central Brazil, and Matses, a Panoan language in the Amazon region in Brazil and Peru. The chapter addresses current concerns in research on evidentiality, which has been associated with operators taking wide sentential scope. It has been noted in the literature that evidentials at times appear to interact with temporal categories, giving rise to the proposal that there is a special dedicated system of ‘evidential tense’. Arregui, Rivero and Salanova present arguments against this view by showing that a standard interpretation of tense can be maintained in evidential contexts across a set of unrelated languages with a broad range of morphosyntactic mechanisms. Complex data that appears to point to a temporal shift in evidential contexts is explained once the contribution of aspect is taken into account.

1.5 Conclusion

The range of case studies presented in this volume offers exciting insights into the construction of modal meanings. Novel data, some from well-studied languages and other from very understudied languages, helps flesh out a new picture of the landscape of modality. While modal interpretations constructed at the various levels of structure in syntactic representations share a family resemblance and appeal to similar mechanisms, the distinct environments within the clause also lead to specialization in the construction of modal meanings.

The theoretical proposals in this volume take steps towards a novel charting of modal domains, bringing together the study of ‘expected’ and ‘unexpected’ modality. Perhaps more importantly, the chapters in this volume highlight the relevance of a perspective that combines the careful study of language-specific details in morphology and
syntax with a broad view that can identify the building blocks of modal meanings across languages.