

Introduction: Tense and Aspect across Languages

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Variation across languages has always fascinated linguists, but in the past, cross-linguistic variation has mostly been investigated in form-related subdisciplines (phonetics/phonology, morphology, syntax). The idea that variation in form has an impact on meaning enabled [Matthewson and von Stechow \(2008\)](#) to connect typological insights to the universal principles underlying formal semantics. Another milestone in the recent literature is the introduction of the notion of language-bound compositionality, [Szabó's \(2020\)](#) cross-linguistic reinterpretation of Frege's principle of compositionality. With this understanding, the language-specific ways in which complex meanings are built take centre stage in semantic theory.

Recently, the *Oxford Handbook of Linguistics* series published several volumes in which phenomena at the syntax–semantics interface were investigated from different theoretical and comparative perspectives, including case studies on topics such as an ellipsis ([Van Craenenbroeck and Temmerman 2022](#)), grammatical number ([Cabredo Hofherr and Doetjes 2021](#)), and negation ([Déprez and Espinal 2019](#)). Even so, cross-linguistic semantics is a relatively recent branch of semantics, with a limited number of edited volumes or Special Issues bringing together state-of-the-art research on fundamental topics of semantic variation. We think the time is ripe to produce this collection of research papers because additional methodologies for data collection and analysis have become available to the semanticist over the past few decades. Some originate in the general semantics literature others come from descriptive, comparative, cross-linguistic, and typological research. This Special Issue includes papers that use innovative approaches, such as advanced fieldwork techniques, psycholinguistic experiments, and parallel corpus research, to strengthen the methodological foundations of cross-linguistic semantics.

For internal coherence, this Special Issue focuses on the empirical domain of tense and aspect. Not only is the semantics of tense and aspect a core area of interest in semantic theory, but it also constitutes one of the empirical domains where the relevance of cross-linguistic variation has long been recognized ([Smith 1991, 1997](#); [Bittner 2014](#); [Binnick 2016](#)). As far as we can see, all languages have ways of referring to time and events; therefore, cognitive and semantic universals are awaiting discovery. Simultaneously, languages have different ways of conveying reference to time and events, so any claim about semantic universals has to be connected to intricate patterns of cross-linguistic variation. A proper theory of tense and aspect builds on case studies to provide a full-fledged semantic and pragmatic analysis of patterns of variation. The empirical patterns provide the input for a cross-linguistically robust semantics of major tense-aspect categories. This is a non-trivial task because reference to time and events implies all levels of meaning as well as their interactions:

- Lexical semantics (open-class aspectual classes like stative/non-stative verbs, closed-class time adverbials like *yesterday*, semi-functional expressions like measurement *for/in* phrases, temporal connectives like *before/after*).
- Compositional semantics (sentence-level meaning is built up from the combination of lexical and semi-functional semantic meaning coming from verbs, adverbs connectives, etc., plus the contribution of grammatical aspect if present (for instance



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perfective/imperfective aspect), plus the contribution of tense if present (for instance present/past tense), plus the contribution of truth-conditional operators with potential aspectual impact (for instance negation), plus the contribution of other formal markers of event structure if present (for instance intonation contour).

- Dynamic semantics (discourse meaning is built up from the context-updating potential of sentences with a particular temporal/aspectual profile).
- Pragmatics (presuppositions, implications and rhetorical structure related to temporal and aspectual information conveyed by sentences or sequences of sentences in discourse).

The complexity of reference to time and events is mirrored in the myriad of approaches in the literature, each with its own terminology and conceptual underpinnings. In this Special Issue, we mostly sidestep theoretical divides and focus on the way different perspectives complement each other and—together—move the field forward.

Even though there is an extensive literature on tense and aspect, the empirical coverage in terms of languages of the world is far from complete, so there is much to be gained from new methodologies checking earlier insights against a broader and more systematic body of data. To maintain the delicate balance between data and theory, we requested papers that contain new linguistic data (or new empirical insights on familiar data) that take us beyond English and focus not only on the language-specific analysis in the framework of the authors' choice, but explicitly discuss the impact of these data for linguistic theory. We are extremely grateful to our contributors for living up to the challenges we raised and (collectively) producing a Special Issue that exceeds our expectations. We also owe a huge debt of gratitude to the reviewers who have joined us in our endeavour and have provided thoughtful and constructive comments, often adapting themselves to frameworks that were not their own.

The collected papers address questions of meaning from different theoretical perspectives and claim their place as independent publications. Simultaneously, they interconnect in different ways, reflecting the progress made in the field of cross-linguistic semantics. The papers by Bednall and Caudal, Bertrand, Aonuki, Chen, Davis, Gambarage, Griffin, Huijsmans, Matthewson, Reisinger, Rullmann, Salles, Schwan, Todorović, Trotter and Vander Klok, Caudal and Mailhammer, Corre, Kos, and de Wit and van der Auwera demonstrate how the growing interest in under described languages progressed into semantics, but the languages under investigation and research methodologies differ significantly. Kos et al. complement data on typologically diverse languages collected in the literature with new data points from languages as diverse as Thai (Kra-Dai language family) and Kwaza (isolate spoken in Amazonia), adopting a cognitive linguistic lens to place them in a comparative perspective. Corre uses corpus data from translated novels to provide new empirical insights into Breton. In the absence of a written tradition, Bednall and Caudal, alongside Caudal and Mailhammer appeal to explorative fieldwork at the interfaces of semantics with phonetics and discourse to analyze reference to time and events in Anindilyakwa and Iwaidja, two Australian aboriginal languages. Bertrand et al. show how a semi-structured picture-based story tellingstorytelling design allows us to explore the counterparts of a familiar tense-aspect category like the *Present Perfect* across typologically diverse languages.

Slavic languages have always played an important role in the literature on tense and aspect, and this Special Issue is no exception. Innovative methodologies such as psycholinguistic experimentation highlight the impact of grammatical aspect on semantic processing (Klimek-Jankowska), and parallel corpus research successfully untangles subtle differences within the Slavic language family (Gehrke).

Western European languages have been extensively researched for tense and aspect in the semantic literature. Nevertheless, the papers by Mulder, Schoenmakers, Hoenselaar and de Hoop; Fuchs and Gonzalez; García-del-Real and van Hout; De Swart, and Tellings and Wälchli show it is possible to finetune the empirical picture we have of these languages. Mulder et al. exploit data from literary translations in four languages and account for the varying patterns in an optimality-theoretic framework. Fuchs and Gonzalez investigated

three translations of a literary novel targeted at Spanish speakers in different parts of the world, exploring the benefits of translation data for micro-variation research. Through carefully designed L1 acquisition experiments, García-del-Real and van Hout tease apart the contributions of compositional and discourse semantics to the interpretation of imperfective aspect. Based on data on dependency relations extracted from Europarl (Koehn 2005), De Swart, and Tellings and Wälchli prove that while compositional semantics is cross-linguistically stable, lexical variation is much richer than the existing literature predicts. The contrast between lexical and grammatical meaning comes back in Le Bruyn, Fuchs, van der Klis, Liu, Mo, and Tellings and de Swart, who reflect on the different parallel corpus research traditions in contrastive linguistics, typology, and cross-linguistic semantics.

Where Slavic and Western European languages require overt tense morphology on the verb, many languages in the world realize reference to time and events by other means. As Boogaards shows, comparative corpus data in which data from two very different tense-aspect systems (*in casu* Dutch and Mandarin) are aligned shed new light on typologically very different languages. The embedding of such differences in the language's grammar as a whole shows how this affects the syntax–semantics interface (Sun and Demirdache, Zhao).

We are pleased that great care has been placed on building up and analysing the datasets used in the Special Issue and assessing their relevance for linguistic theory. The emphasis on reliable data has increased the awareness of methodological pluralism in addressing different kinds of research questions. The paper by Boogaards ties in with the methodological reflections in Le Bruyn et al. on the range and limits of multilingual corpus research. The two papers together mirror the plea for innovative field work/fieldwork to investigate languages lacking a written tradition in Bertrand et al., Bednall and Caudal, and Caudal and Mailhammer. Finally, triangulation as a way to increase the credibility and validity of research in cross-linguistic semantics emphasizes the importance of testing hypotheses about cross-linguistic variation through experimental psycholinguistic paradigms (Klimek-Jankowska).

Although formulated in different theoretical frameworks, Kos et al.; Bertrand et al.; Sun and Demirdache; Zhao; and Mulder et al. underscore the need for feedback of new empirical insights obtained through cross-linguistic research into linguistic theory. The idea that semantic theory should not only capture meaningful distinctions familiar from a handful of well-analysed languages but capture a broader range of linguistic and cognitive generalisations ties in with the debate on semantic universals. These aims cannot be realized until sufficient data on a wide range of languages can provide the empirical basis to support cross-linguistic semantic claims.

No doubt, there are many other connections that can be established between the papers in this Special Issue, but we leave the pleasure of discovering them to the reader.

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