<center>Situational biases in diachrony: how register distinctions emerge</center>

Background Grammaticalization, broadly defined as the emergence of functional from lexical meanings, is driven by the conventionalization of rhetorical patterns, i.e. the encoding of procedural meaning (Detges and Waltereit 2002; Traugott and Dasher 2001; Schmid 2020). Further, innovation is shaped by functional pressures, it represents "accommodation to the linguistic functionality of the context [...] on the choices speakers make" (Kroch 1989: 238). It is commonly assumed that these functional effects remain *constant* over time, leading to the prediction that replacement of a competitor occurs at a constant rate across linguistic contexts (ibid.). This is Kroch's *Constant Rate Hypothesis*.

In this paper, I argue that it is imperative to distinguish between functional (e.g. processing, articulatory, prosodic, information-structural) and situational (e.g. epistemic stance, affect, modality (written/oral), social evaluation) factors. The latter are not constant over time within a language (Kauhanen and Walkden 2018); that is to say, there exist more-or-less conventional associations between situational dimensions and linguistic forms, which are subject to change on small time scales. On the whole, this leads to the prediction that non-constant contextual biases should 'perturb' a constant rate of change; speed it up or slow it down (ibid.; see Warner 2006; Wallage 2008, 2017).

I will argue that the CRE is not invalidated by such instances. However, it is necessary to be precise about what time periods and what types of texts are relevant in diachronic analyses involving quantitative assessments of rates of change. It is no trivial matter to do so in cases of partial replacement, where one sees a degree of optionality and specialization but no complete S-curve. Such a situation commonly occurs and can be found, for instance, in periphrastic alternations in different grammatical domains, which are known to persist diachronically, e.g. in the English progressive and double comparative (Alexiadou et al. 2022), Romance and Germanic perfect/past marking alternations (de Swart 2021), and future marking in Romance (Detges 2020).

Overview To my knowledge, little work has been done which explicitly addresses the role of situational biases in language change (see, however, Kauhanen and Walkden 2018). For the historically oriented formal semanticist, taking this perspective offers a way to reconcile the following two assumptions which may at first blush appear to be in conflict.

Assumption 1: Situational meaning drives change: "Grammar is a conventionalized outcome of routines addressing[...]recurrent tasks in communication" (Detges 2020: 297)
Assumption 2: Situational meaning is independent of grammar (Labov and Harris 1986).

My line of reasoning is as follows: as long as one is careful to distinguish between time-dependent (situational) and time-independent (functional) factors, no tension arises. Moreover, this perspective brings to light other often-under appreciated facts about the interplay between language-internal and external factors in variation and change; I believe this is ultimately crucial for reconciling the Constant Rate Hypothesis with more traditional approaches to grammaticalization, which typically make the assumption that change is non-constant in its propagation.

View from grammaticalization theory Grammaticalization trajectories exhibit a high degree of regularity (the property of undirectionality; Hopper and Traugott 1993, Dahl 2001) and are typically characterized as consisting of distinct components: (i) reanalysis and (ii) (analogical) extension (Traugott and Trousdale 2010; Harris and Campbell 1995). First, a new variant is innovated—it emerges. Variants do not immediately encroach on an entire domain but carve out a semantic sub-domain which serves to communicate a particular paradigmatic contrast.

Further bleaching and conventionalization processes extend the variant's domain over a larger semantic space (Heine et al. 1991).

Specialization This process can result either in total replacement, ousting the older competitor, or (partial) specialization, carving up the semantic domain. This change may go to completion or result in a system in which the variants are specialized not categorically, but along a continuous or ordinal scale like formality or prosodic weight (Wallenberg 2013). Moreover, there are good reasons for thinking that "stable" variation is an instance of the latter, that is, very slow change (Fruehwald and Wallenberg 2013).

Structure of paradigm The older more general variant and the younger more specific one may exist in a subset-superset relationship that gives rise to the pragmatic division of labour (a Horn scale) which is a pre-requisite for cyclical trajectories of change (Horn 1984; Deo 2015; Mühlenbernd and Enke 2017). This configuration leads to pragmatic reasoning; the innovative variant acquires not-at-issue meaning, which I argue is what allows for *imperfect specialization* (in Wallenberg's terms) in the first place.

Beachheads and satellites Aldai (2002) points out the existence of linguistic environments which he terms *beachheads*. These are defined as syntactic contexts or particular meanings which serve to incidentally privilege the functional potential of a given change (not to be confused with Heine's 2002 *Bridging* contexts, which support a newly innovated meaning). This may result in a configuration where sychronically one observes pragmatic competition between beachheads and more conservative contexts, leading diachronically to increased specialization of form-function pairings as a result of the ever-present Principle of Contrast (Clark 1990). Koch and Österreicher (1996) term emerging markers *satellites* in the context of a discussion of Romance TMA markers e.g. the alternation between synthetic and periphrastic futures in French *je irai* 'I go.FUT' vs. *je vais aller* 'I go.1p go.inf' to express 'I will go'. Beachheads are often, though not always, time-dependent (Rosemeyer and Grossman 2017; Wallage 2008, 2016; Warner 2006).

Division of labour: Perfect Paradigmatic markedness and socio-linguistic markedness go hand-in-hand; newer variants are associated with spoken or informal registers and this division of labour can be maintained over larger historical time periods, as is the case in Romance (Koch and Österreicher 1996). This association is most likely rooted in something deeper than the mere novelty of the newer marker; de Swart (2021) shows that across Romance and Germanic translations of Harry Potter, use of perfect marking is restricted to dialogue, not appearing at all in narrative sequences, which call for the perfective past. Thus, the perfect in these languages is associated with the grammar of the spoken language. In other words, it requires anaphoric rather than deictic reference and is thereby constrained by the structure of the extra-linguistic situation. These situational associations belong to the not-at-issue component; crucially, the deictic-anaphoric contrast enters into a conventionalized association with a register contrast (cf. Koch and Österreicher 1985; *enregisterment* in the terms of Agha 2004).

Division of labour: Progressive The progressive in English as the more marked form gives rise to not-at-issue inferences due to Gricean reasoning. Alexiadou et al. (2022) show that the diachronic "stabilization" of this alternation in English was maintained by means of its specialization along register dimensions.

Outlook As formal semanticists, we concern ourselves with the interplay between truth-conditional and other dimensions of meaning; as historical linguists, we are also concerned with delineating the time course of change. Situational dimensions add a layer of complexity to the data and require special attention; conventionalized associations between forms and these dimensions serve to constrain the trajectory of change, e.g. in beachheads and in specialization along the non-at-issue component, the latter amounting to the emergence of register distinctions.

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