

# Grammars as affordances for interaction: towards an evolutionary tale

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This talk sketches a grammar which replaces an encapsulated concept of language competence with a model in which structure in natural languages (NLs) is an emergent phenomenon based on interactive manipulation of situated perception-action mechanisms. In everyday conversation, utterances and thoughts disperse across interlocutors diffusing individual cognition and leading to establishment of social groupings at various scales (Lerner, 1993). As interlocutors switch speaker-hearer roles even within a single utterance-exchange, a grammar needs to license the sharing of syntactic/semantic dependencies. However, this is a phenomenon posing severe challenges for conventional grammar assumptions. We outline a model (Dynamic Syntax DS: Kempson et al., 2001; Cann et al., 2005; Kempson et al., 2016) in which verbal and non-verbal stimuli are defined as triggers for the operation of conditional probabilistically weighted actions. Under this view, human interaction consists in the provision (*NL generation*) or exploitation (*NL parsing*) of *affordances*, situated action opportunities that create online an ad hoc common processing environment leading to action-coordination among interlocutors. This is achieved by assuming that previous individual experiences with speech and parsing induce the dynamic formation and resolution of anticipatory states (goals). Goals can be achieved either by an individual generating verbal/non-verbal action or by pursuing the affordances offered by an interlocutor or the non-linguistic environment. The immediate effect is the licensing of NL split-actions, including such feedback activities as interruptions/corrections/clarifications, through seamless shifting between speaking (action) and listening (perception). Modelling such data through grammar-internal low-level sensorimotor mechanisms undercuts the need to invoke high-order inference and mindreading to underpin coordinative exchanges.

We then address the significance of DS within a larger cognitive perspective. Noting parallels between DS and the enactive cognition stance, as explored by Clark (2016); Anderson (2014) *ao*, we argue that DS models a niche sub-system within this overall account. By incorporating the par excellence representational system, NL, within enactive perspectives, competing proposals regarding the status of representations can be seen as different ways of talking about affordances and their emergent and evanescent products. The compatibility of such a view of NL-competence with the embodied view of cognition indicates, first, that NL acquisition can be seen as emerging from a grounding in interaction simpliciter, contra Tomasello (2008) who assumes innate capacity for Gricean-style inference; secondly, analogously, that NL evolution can be seen as having emerged inexorably from the human prior disposition to interact.

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