

Parallel Sessions

The cognitive foundations of situation type (events vs. states)

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Since at least the well-known work of Vendler (1957) the classification of situations concerning their internal temporal structure is part of the day-to-day business of event semantics. Furthermore, within this classification linguists have established two main categories: telic, dynamic events and atelic, non-dynamic states. But does this theoretical distinction have a cognitive equivalent? If so, what are the differences in the processing and representation of an event sentence vs. a state sentence? So far, only few studies have investigated these questions. Gennari & Poeppel (2003), for example, found longer reading times for sentences containing eventive verbs (e.g., build) than for sentences containing stative verbs (e.g., love). They explain this result by a costlier processing of events than of states, caused by the more complex semantic structure of eventive verbs (semantic complexity). In an alternative account, developed in Alex-Ruf (2016), these differences in processing effort are traced to differences between mental simulations: the simulation evoked by an event has a more complex structure than the simulation evoked by a state (simulation complexity). A crucial factor for this higher level of complexity within a simulation is motion, which is a defining component of (at least concrete) events. According to Grounded Cognition theories, the processing of a linguistic expression describing a bodily movement entails an activation of the motoric modality. Glenberg & Kaschak (2002) were among the first to provide evidence for this assumption. They established the action-sentence compatibility effect (ACE) to describe an influence of linguistically expressed bodily motion on the movement which has to be performed to give a task response. In my presentation I will illustrate in detail how the theory of differences in the complexity of mental simulations can contribute to the classification of situations in events and states. Furthermore, I will present three studies that provide evidence for this account on simulation complexity: The first experiment, a self-paced reading study with moving-window design, reveals longer reading times for event sentences than for state sentences and thus replicates the results of Gennari & Poeppel (2003). In experiment 2 and 3 the action-sentence compatibility paradigm is used. Within the results there is subtle evidence for an ACE during the processing of event sentences which imply a movement, while this is not the case with state sentences. In contrast to the study of Gennari & Poeppel, German eventive-stative-ambiguous verbs like *bedecken* (cover) and *schmücken* (decorate) are used to avoid confounding factors.

References

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Multimodal prominences: How eyebrow and head beats are combined with pitch accents to encode information structure in Swedish news readings

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Beat gestures have been shown to be integrated with speech at an early stage in perception, facilitating both phonological [1] and semantic processing [2]. They also align with pitch accents in speech production [3,4], and there is evidence suggesting that they are more likely to occur with perceptually strong accents than with weak ones [5]. However, it is not well understood yet whether and how the

two modalities (beat gestures, pitch accents) might interact in the encoding of different levels or types of multimodal prominence (MMP), and how such MMPs might be employed by speakers and listeners in the (de-)coding of information structure (IS). The current study attempts to approach this research question by investigating (1) how MMPs are constructed by combining eyebrow (EB) and head (HE) movements with so-called focal pitch accents (FA) in Stockholm Swedish, and (2) whether the choice of MMP or verbal- or visual-only prominence markers relates to IS. Our corpus so far consists of 31 brief news readings from Swedish Television, comprising speech from four news anchors (two female, two male) and 986 words (6 ½ minutes) in total. It was annotated for focal accents and head and eyebrow beats, independently by three annotators (Fleiss' Kappa (κ) for FA: $\kappa = 0.77$; HE: $\kappa = 0.69$; EB: $\kappa = 0.72$). Our results reveal that four types or combinations of prominence markers occur rather frequently in the corpus: FA+HE+EB (39 tokens), FA+HE (126), FA only (i.e., no gesture: 128), and HE only (58 tokens), while FA+EB (3) is pretty rare, and both HE+EB (10) and EB (15) in 70-80% of the cases occur on words directly preceding FA(+HE)-annotated words. That is, EB movements occur primarily in conjunction with both FA and HE. A preliminary functional analysis of the data has revealed the following general tendencies: (1) In almost all noun phrases (and many verbs) at least one word receives some kind of prominence. A high density of prominent words is most likely a general characteristic trait of news speech, where almost all referents represent new information. (2) In sections representing the theme of the news story, FA, HE, and FA+HE are all common prominence markers. (3) However, initial clauses, when presenting a common ground or the theme of the news story (about 2/3 of the texts), we observe a preference for using FA only for the first 2-3 prominent words of a news story. (4) Finally, EB seems to be used mainly as a kind of intensification marker (in line with [4]), and is able to cancel out the observation in (3) when occurring early in a text. The results of [5] suggest equivalent, cumulative prominence functions of head and eyebrow movements. By contrast, our results provide initial evidence for a differential usage of focal accents and head and eyebrow movements with respect to information-related factors such as common ground or intensification.

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The effects of presenting ontologic information in terms of opposites in a medical context

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An extensive body of literature has demonstrated that many patients do not fully understand the information provided in informed consent forms (e.g. Hietanen Aro, Holli, Absetz, 2000; Brown, et al., 2004). Comprehension is particularly limited in the case of people with a lower standard of education, even when simple language is used (Breese, Burman, Goldberg, Weis, 2007; Dresden & Levitt, 2001; Joffe et al., 2001). The way in which information is presented usually ignores the fact that humans perceive (Bianchi, Savardi & Kubovy, 2011; Kelso & Engstrøm, 2005), conceptualize (Gardenfors, 2000, 2014) and linguistically describe (e.g. Jones, Murphy, Paradis, Willners, 2011) their experiences in terms of opposites. We explore for the first time whether and how the use of opposites impacts on understanding of information communicated in an oncologic scenario, i.e. using the terms small-large to describe a nodule (i.e. bipolar communication) rather than speaking in terms of centimetres (i.e.