Prototype vs. Prominence: Experimental studies on the decomposition of agentivity

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Agentivity is a central category in human language and cognition (e.g. Spelke & Kinzler, 2007). In both theoretical and empirical linguistics, agentivity has sparked an enduring debate about the adequate definition and empirical adequacy of the agent notion in sentence interpretation (e.g. Levin & Rappaport, 2005; Van Valin & LaPolla, 1997). On one dominant view, the agent is conceived of as a prototype category that is decomposed in different semantic role features. The prototype accumulates the highest number of agent features and is the primary candidate for subject selection (Dowty 1991). Thus, this approach assumes that feature accumulation is the key factor for argument selection across different sentence types/constructions (Dowty, 1991; Primus, 2011). Contrary to this, psycholinguistic findings suggest that agent features may be flexibly ranked depending on language, speaker or the choice of syntactic construction and its discourse function (e.g. MacWhinney et al., 1984; Alday et al., 2015). Following this lead, we assume that agentivity effects might be better captured if agent features are ranked differently depending on the choice of the construction. Such highlighting of features meets the criteria of the notion of prominence as elaborated in Himmelmann & Primus (2015).

The present paper aims to address the question whether agent prominence and feature ranking can indeed provide a more adequate account for agentivity effects as compared with the prototype approach and feature accumulation. In a series of rating experiments, we investigated transitive argument structures in personal passives, actives, and do pseudoclefts. While the prototype approach predicts identical acceptability clines across these constructions and consistent use of feature accumulation, the prominence approach predicts variation due to feature ranking that differs between these constructions.

In order to be able to clearly identify agentive features, we focused on German verbs entailing a volitional and/or sentient agent in our studies, hence including volitional perception (e.g. watch), non-volitional perception (e.g. see), non-volitional emotion (e.g. hate) and non-volitional cognition verbs (e.g. know) (cf. Lehmann et al., 2004; Viberg, 2001; Van Valin, 1999). We constructed experimental items such that in each verb class there were six different verb lexemes, each occurring in ten lexically different sentences. All sentences were constructed to be meaningful and grammatical. In two experiments, participants were asked to judge experimental items for acceptability on a 6-point scale. Data were analyzed using cumulative linked mixed effects regression models. We found that (i) acceptability clines varied among constructions and (ii) that feature accumulation as implicated by agent prototypicality does not capture the acceptability clines for individual constructions.

In Experiment 1 (N = 69) we investigated the influence of verb class and voice. We found that personal passives show an acceptability drop for cognition verbs that is larger than in actives, while volitional and non-volitional perception verbs cluster with emotion verbs in passives but not in actives. All sentence verb classes were rated better than a control condition including verbs with neither volition nor sentience as agent-
tive features (e.g. exhibit), resulting in the following acceptability cline in the passive: watch, see, hate > know > exhibit. This finding cannot be accounted for by agent prototypicality, which predicts that the agent with the greatest number of agentive features (provided by volitional perception verbs) is rated best in both active and passive. Feature ranking, by contrast, is compatible with these results in assuming that volition is not a prominent feature for personal passives. Moreover, our results suggest that sentience has to be decomposed since cognizers do not cluster with perceivers and emoters. Hence, agent prominence (construction-dependent feature ranking), but not agent prototypicality (construction-independent feature accumulation), accounts for the different ratings in active vs. passive voice including German sentience verbs.

In Experiment 2 (N=60), the same verbs were embedded in do pseudocleft structures (What the spectator did was watch the landing on the moon, cf. Jackendoff, 2007). Results showed a cline different from the one in active and passive voice above. Volitional perception (watch) was rated significantly better than any other class of non-volitional sentence verbs, which were in turn rated better than the control condition (exhibit), resulting in the following acceptability cline: watch > see, hate, know > exhibit. While this finding is well compatible with feature accumulation (volition + sentience for watch vs. only sentience for the remaining sentence verbs), it is inconsistent with further assumptions. First, the do pseudocleft is not only sensitive to volition, as claimed for English (Jackendoff, 2007), but also to sentience in German. Second, in comparing the results from Experiments 1 and 2, it is also apparent that feature accumulation does not hold for all the tested constructions.

In summary, construction-sensitive feature ranking captures all our data and suggests that agent prominence is a more adequate explanans than agent prototypicality. Hence, gradient human categorization may not be based on prototypicality alone.

References