

## The role of grammar in computer-aided metaphor research

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One of the key findings from studies on the interaction of conceptual metaphor with grammatical constructions is that generalizations exist in how the metaphoric source and target domains are expressed in argument structure constructions (Sullivan 2013, David 2016). For instance, in transitive constructions, it is the verb that evokes the (concrete) metaphoric source domain, while the direct object evokes the (abstract) metaphoric target domain, and not the reverse. Examples of this include *crush someone's spirit* and *tackle poverty*. Indeed, as I will argue in this talk, when analyzing the full range of argument structure constructions some cross-constructional as well as cross-linguistic generalizations begin to emerge.

First, I present the links between metaphor and grammar within the architecture of Embodied Construction Grammar. ECG is a version of construction grammar that formalizes the meaningfulness of grammatical structures as hierarchically-organized image schemas (Feldman, Dodge & Bryant 2009). Then, I show how establishing such links has been fruitful in MetaNet, an automated metaphor identification system (Stickles et al. 2016). Finally, I show how the metaphorical construction model is useful in doing annotation of metaphor in corpora. I introduce a team-based online annotation tool I developed – Constructional Annotation Net – in order to track metaphor use in a corpus of cancer patient blogs (David & Matlock in prep). These corpus and computational implementations of metaphoric constructions show that establishing the metaphor-grammar link can reap immediate computational benefits in conceptual metaphor research.

### References

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