

## Iconicity in usage: A cross-linguistic study of causative event descriptions

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Based on the results of a production experiment with speakers of six genealogically independent languages, English, Japanese, Korean, Kupsapiny (Nilotic, Nilo-Saharan; Uganda), Sidaama (Cushitic, Afro-Asiatic; Ethiopia), and Yucatec Maya (Mayan; Mexico and Belize), this study addresses the issue of how language use reflects the hypothesized iconicity between the directness of causation in an event and the morphosyntactic integration of the construction used to describe it (Silverstein 1976, Givón 1980, Haiman 1983): the more direct the causal relation, the tighter the morphosyntactic integration of the construction used to describe it.

In the literature on the linguistic representation of causality, counterexamples to the iconicity principle have been reported. For example, Escamilla (2012) claims that more complex constructions are not necessarily used for a less direct causative relation. Thus, it is worth investigating whether iconicity manifests itself across languages in covariation between usage frequency of constructions of varying compactness and the directness of the causal chains they describe.

We collected descriptions of video clips depicting causal chains (varied along multiple dimensions of directness) from speakers of the six languages, and investigated how the construction types produced by each speaker differed depending on the directness of causation. We took a multi-factorial approach to the directness of causation in terms of any properties of events that might affect the choice of different kinds of constructions in describing causal relations (Bohnemeyer et al. 2010). The factors that we examined as those of the directness of causation are: (i) causal chain mediation types (the presence of an intermediate causee), (ii) the type of the causer (human vs. natural force), (iii) the type of the affectee (human vs. object), (iv) the use of an instrument, and (v) the causer's intention to cause the resulting sub-event to occur. We employed the Layered Structure of the Clause model of Role and Reference Grammar (Van Valin 2005) to measure the tightness of the morphosyntactic integration of constructions.

Our major findings based on the analysis of the data using a Spearman's rank correlation test are as follows. First, events with a causer and an affectee but without any intermediate causee are more likely to be expressed with morphosyntactically tighter constructions than events with a causer and an affectee as well as an intermediate causee. Second, when no intermediate causee participates in events involving causality, events with an object affectee tend to appear in morphosyntactically tighter constructions than those with a human affectee (Hopper & Thompson 1980). Third, when no causee intervenes between the causer and the affectee, morphosyntactically more compact constructions are more commonly used for events where the causer's action is volitional than those where the causer's action is accidental, though there is some crosslinguistic variation in the effect of causer intentionality.

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