

State/change of state lability and the meaning of verbhood

Introduction. Across languages, expressions that are categorized as adjectives in English, e.g., *red* in (1a), (henceforth property concept lexemes ‘PCLs’, after Thompson 1989) often have translational equivalents that are nominal (2a) or verbal (3a) in category (Dixon 1982; Thompson 1989; Hengeveld 1992; Bhat 1994; Wetzler 1996; Stassen 1997; Beck 2002; Baker 2003). Regardless of the category of the property concept state however, all languages have ways of describing changes *into* states. Change of state forms moreover generally bear some derivational relation to the form

- | | | |
|-----|---|---|
| (1) | English (adjectival PCL) | of the word describing the state the change is into, e.g., (1b), where the suffix <i>-en</i> relates the PCL <i>red</i> to the word describing a change into it, i.e., the change of state verb <i>red</i> den. |
| | a. Kim’s face is <i>red</i> | |
| | b. Kim’s face <i>reddened</i> with anger. | |

Goal. We argue that the nature of the derivation from state to change-of-state is conditioned, at least in part, on the lexical category of the state, with the result that verbal PCLs are the only type that may show zero derivation in this case. We argue that this observation in turn confirms a common, yet seldom argued for intuition about the **semantic nature of verbhood**, namely that **only verbs can describe changes into states**, articulating this intuition in model-theoretic terms.

Typology. Across languages, property concept lexemes exhibit three types of derivational relationships to words describing changes into the states they denote. The first, where change of state is derived from the static state, is exemplified by English, as in (1) above, where the change of state verb *red*den is derived (on the surface) from the adjective through the addition of the suffix *-en*.

The second, where both state and change of state are derived from a bound root, which we call “equipollent” (cf. Haspelmath 1993), is exemplified by Ulwa as in (2) (Hale & Keyser 2002:122-123; Koontz-Garboden 2009). The final type is “**labile**”, where there is **no surface morphophonological difference between state and change of state lexemes** (this might, in at least some languages, not be derivation at all, but this is a separate issue, see Koontz-Garboden 2007, Matthewson et al 2015). This type is illustrated by Tongan, as in (3) (Koontz-Garboden 2007:117).

- | | | | |
|-----|--|-----|--|
| (2) | Ulwa (nominal PCL) | (3) | Tongan (verbal PCL) |
| | a. Â lai <i>h</i> yam-ka.
that topic good-PC
‘That is good.’ | | a. ‘Oku <i>loloa</i> ho ‘ulu.
IMP long your hair
‘Your hair is long.’ |
| | b. Alas îwai dai, katka yam-p-ida.
S/he be.ill was but good-vb.class-3sg.past
‘S/he was ill, but got better.’ | | b. ‘Oku <i>loloa</i> vave ho ‘ulu.
IMP long fast your hair
‘Your hair is quickly getting long.’ |

Study. Previous work, based on convenience samples of languages on the one hand or on detailed studies of individual languages on the other, suggests a link between the category of PCLs in a language and the possibility of a labile relationship between the PCL and the associated change of state form (Koontz-Garboden 2005, 2007; Matthewson et al. 2015): In particular, it has been argued that lability is found in cases where the simple state is *verbal* in category.

In this talk, we provide more systematic crosslinguistic evidence for this state of affairs, drawing on the database “Verbal Roots Across Languages” (<https://verbal-roots.la.utexas.edu>). The database was designed to systematically investigate the morphological derivational relationship between stative forms and their semantically related change of state forms crosslinguistically (see

Beavers et al. 2021), and includes state/change of state pairs for 36 property concept states in 88 languages. State/change of state pairs are labeled according to the type of derivational relationship between them, as described above.

In the present study, we extracted state/change of state pairs in all languages in which there was at least one *labile* pair. We then returned to the descriptive resources referenced in the database to find the lexical category of the stative member of the pair. In this talk, we discuss this exercise in detail, and present the results of a Bayesian mixed effects logistic regression taking the category of the property concept state as a fixed effect, and language as a random effect on all fixed terms. Our results show that labile relationships between state/change of state pairs are much more likely (with statistical significance) **just in case the simple state is verbal in category**.

Claims about verbhood. We argue that these results follow from the intuition that **change of state predicates can only be verbs**. Fleshing out this intuition in model-theoretic terms, we suggest that “change of state” is encoded as the relation of an ordinary individual (with a patient thematic role) to a dynamic eventuality. Making sense of our results, we argue that only *verbs* can denote such relations. (Potential counterexamples to this claim, found for example in deverbal nominalizations like *the destruction of the city* and deverbal adjectives like *the flattened metal*, are deverbal categories that undergo *re-categorization* from verb to noun/adjective, and are therefore syntactically verbs at the level at which they have the relevant meaning; Harley 2009, Alexiadou 2001; Beavers & Koontz-Garboden 2020, Alexiadou et al. 2015).

If only verbs can relate ordinary individuals to dynamic eventualities, then it is unsurprising that PC *verbs* need not show any overt derivation to a change of state verb, since they are already of the right category to be change of state denoting. Nominal and adjectival PCLs, by contrast, are not and must therefore undergo category-changing derivation in order to be of the right category to express a change of state meaning. The necessity for such a derivation in the non-verbal cases, in contrast to the verbal cases, is what gives rise to the facts observed in our typological study, as category change is commonly marked by overt derivational morphology across languages (see Štekauer et al. 2012). In other words, the logic is that the need to undergo verbalization in order to encode a change of state meaning results in a higher likelihood of displaying derivational morphology, making lability far less likely between non-verbal PCLs and their change of state counterparts.

Conclusion and implications. In this work, we show through a systematic typological study that the derivation of change of state verbs from PCLs is less likely to be marked morphologically just in case the property concept lexeme that the change of state verb is derived from is verbal in category, as opposed to nominal or adjectival. We argue that this observation is a consequence of the generally accepted, but little argued for, fact that only verbs can be change of state denoting; only verbs may relate individuals to events. In making this argument we hope to show that there are lexical semantic generalizations that can be made about categoryhood, when properly articulated.

Selected references: Beavers et al. 2021. States and changes of state: A crosslinguistic study of the roots of verbal meaning. *Language*. • Dixon 1982. Where have all the adjectives gone? de Gruyter. • Harley 2009. The morphology of nominalizations and the syntax of vP. OUP. • Haspelmath 1993. More on the typology of inchoative/causative verb alternations. John Benjamins. • Koontz-Garboden 2007. Aspectual coercion and the typology of change of state predicates. *JoL*. • Koontz-Garboden 2009. Ulwa verb class morphology. *IJAL*. • Matthewson et al. 2015. Inchoativity meets the perfect time span: The Niuean perfect. *Lingua*. • Štekauer et al. 2012. Word-Formation in the World’s Languages. CUP. • Thompson 1989. A discourse approach to the crosslinguistic category ‘adjective’. John Benjamins.