

Possession and categorization in a degreeless language

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Introduction. The grammar tied to *property concepts* – adjectives in languages with that category but nouns or verbs in others (Dixon 1982; Thompson 1989 – has been an area of longstanding study in the syntax (Bresnan 1973) and semantics (e.g., Kamp 1975; Creswell 1976) of familiar languages. Recent crosslinguistic investigations have however provided fertile ground for understanding semantic and morphosyntactic variation in this domain. Two recent, independent findings in this area point to variation in (i) whether the lexical semantics of property concepts is built on degrees (Beck et al. 2009; Bochnak 2015 a.o) and (ii) whether it is built on an acategorical mass-type core, with some possessive semantics required to turn them into predicates of individuals (Menon & Pancheva 2014; Francez & Koontz-Garboden 2017), as shown for Ulwa (Misumalpan) in (1).

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| (1) | Alberto pan -ka
Alberto stick- 3.POSS
'Alberto's stick.' | (2) | Yang as-ki-na minisih -ka
1.SG shirt-1.POSS FILTH- 3.POSS
'My shirt is dirty.' (lit: ...has filth.) |
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Aims. We show first that property concepts in Washo (isolate, USA) are indeed morphologically complex, formed from acategorical roots by a verbalizing v head with a possessive semantics. Second, we demonstrate that F & KG's analysis extends to Washo in a way consistent with Bochnak's observation that it is degreeless. The results show that there is a previously unobserved interaction between degree(lessness), possession, and mass semantics that enriches the empirical landscape while deepening our understanding of the semantics of (property concept) root categorization.

Core data. The crucial pair of data points motivating our claims is shown below. (3) gives an example of 'ordinary' possession (cf. 1) expressed with the suffix *-i?* (the 'attributive suffix' in Jacobsen 1964).¹ (4) shows a parallel with (2), in which the same suffix is found in property concept predication. Note that the category of such constructions is diagnosed by the presence of the mood marker *-i* as the final suffix in both; verbal agreement, tense marking, and negation are also observed. Washo lacks an adjectival category altogether; all property concepts are verbal.

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| (3) | di-gúšu? -i? -i
1-PET -ATTR -IND
'I have a pet/pets.' | (4) | daláʔak ʔ-í:yel -i? -i
mountain 3-BIG -ATTR -IND
'The mountain is big.' |
|-----|---|-----|---|

***-i?* is v .** We argue that the attributive suffix *-i?* is the spell-out of a categorizing v head that encodes possession (Menon & Pancheva 2014), such that (3)-(4) are derived as in (5)-(6). Note that unlike roots such as $\sqrt{\text{PET}}$, which may be zero derived as nominals, property concept roots such as $\sqrt{\text{BIG}}$ only appear overtly derived. Following proposals by both Menon & Pancheva and F & KG, we adopt the idea that property concepts are born as acategorical roots; we further propose that v uniformly categorizes such roots in both ordinary possession (5) and possessive predication (6).

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| (5) | $[_{VP} [\sqrt{\text{PET}}] [_v -i?]]$ | (6) | $[_{VP} [\sqrt{\text{BIG}}] [_v -i?]]$ |
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While the possessive v head Menon & Pancheva propose for Malayalam is null, we argue that *-i?* is an overt realization of precisely this head, lending cross-linguistic evidence to their claim that v may both categorize and introduce a possessive semantics (a position argued against by F & KG

¹Glosses: ATTR: attributive; IND: independent mood; POSS: possessive. Data come from original fieldwork.

due to a lack of cross-linguistic support). As noted by F & KG however, a similar state of affairs is likewise found in Huitoto (Huitotoan; [Minor et al. 1982](#)), lending further evidence to the claim that possession is encoded by the categorizers of property concept roots cross-linguistically.

Interpretation. Building on FKG (2017), we propose that attributive *-i?* denotes a function mapping properties to relations between individuals and properties, as in (7). The first argument of *-i?* is the root it categorizes; we assume that roots are semantically contentful, (i.a. [Marantz 1997](#) (7) $\llbracket -i? \rrbracket: \lambda P_{\langle e,t \rangle} \lambda x_e \exists y [P(y) \& \text{HAVE}(x,y)]$ [Kratzer 2000](#); [Arad 2005](#); [Levinson 2007](#)), such that $\sqrt{\text{PET}}$ is of type $\langle e, t \rangle$ as in (8). In ordinary possession contexts such as (3), we then arrive at the characteristic function of individuals in (9), which when predicated of an individual yields a true proposition iff that individual has a pet.

$$(8) \quad \llbracket \sqrt{\text{PET}} \rrbracket: \lambda x_e [\text{pet}(x)] \quad (9) \quad \llbracket -i? \rrbracket (\llbracket \sqrt{\text{PET}} \rrbracket): \lambda x_e \exists y [\text{pet}(y) \& \text{HAVE}(x,y)]$$

For property concept roots, we follow F & KG’s proposal that these have a mass-type meaning; F & KG follow [Link’s \(1983\)](#) analysis of treating mass nouns as partially ordered by a mereological relation and also introduce a separate size relation over the mass entities (*portions*) to capture their gradable nature. We depart from F & KG, however, following [Parsons 1970](#); [Baglini 2015](#); [Wellwood 2015, 2019](#), and others in assuming that these entities are Davidsonian states (rather than portions), making property concept roots denote sets of states (10). States are a special sort of the domain of eventualities, which are themselves (as is standard in the literature) a special sort of the domain of individuals. Like any other $\langle e, t \rangle$ predicate (10) can compose with *-i?* to create a predicate of individuals possessing some entity (here, a state) in the denotation of the root (11).

$$(10) \quad \llbracket \sqrt{\text{BIG}} \rrbracket: \lambda s_e [\text{big}(s)] \quad (11) \quad \llbracket -i? \rrbracket (\llbracket \sqrt{\text{BIG}} \rrbracket): \lambda x_e \exists y [\text{BIG}(y) \& \text{HAVE}(x,y)]$$

Possessed property concepts in a degreeless language. Washo lacks any degree morphology, measure phrases, etc, leading Bochnak to argue that property concepts in the language are degreeless in the sense of [Beck et al. 2009](#). This raises the question of how previous analyses of possessed property concepts fare with such a language, as they are designed to account for degreeful Ulwa/Malayalam. Here, we follow [Bochnak et al. 2020](#) in assuming that, while degrees may be motivated for certain constructions beyond their state core ([Wellwood 2019](#)), they are not necessary for languages lacking the functional degree morphology to introduce them; we show that the behavior of Washo can be captured on a Davidsonian analysis without recourse to degrees.

For **positive contexts** as in (4), we capture vagueness through the existential quantifier (see (7)), which following F & KG must be contextually restricted, e.g., to those states that are big enough in the size-ordering, making (4) true iff there is a state possessed by the mountain that is big enough in the size-order of big states to count as such in the relevant context. Washo **comparatives** are implicit, consisting of two conjoined positive constructions, and fail to give rise to crisp judgments ([Kennedy 2007](#)). Because our analysis of positive degree constructions is norm-related, so too is our analysis of Washo comparatives (since these are built on a conjunction of norm-related positive constructions), immediately accounting for this behavior. On the overall **lack of degree constructions** in Washo, we follow Wellwood and Bochnak et al in the idea that degrees are introduced by degree morphemes themselves (e.g., measure phrases, comparative morphemes, intensifiers, etc.), and that such morphemes are not part of the functional inventory of Washo.

Conclusion. In sum, although Bochnak’s analysis of Washo does not capture the morphological complexity of verbal property concepts, we can maintain the spirit of his degreeless analysis while

explaining the distribution of attributive *-iʔ* by treating it as a verbal categorizer introducing possessive semantics. More broadly, our observations open up a new cell in the typology of property concepts, showing that there exist degreeless languages that also encode property concept roots as masses, turning them into predicates of individuals with ordinary possessive morphosyntax.

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