

Property concepts and non-mereological semantics in Wolof

Property concepts across categories Adjectival meanings—known in the typological literature as *property concepts* (PCs)—are lexicalized in two ways in the Senegambian language Wolof: i) via stative verbs (PCVs) denoting relations between individuals and properties (1); ii) via mass nouns, denoting the abstract properties themselves (PCNs) (2).

- (1) PCVs: *xonq/njool/bees/baax/rafet* (2) PCNs: *doole/sago/wërsëk/xel/rafetaay*
 red/tall/new/good/pretty strength/calm/luck/wit/prettiness

The latter strategy is widespread in languages which lack an open class of adjectives (Dixon, 1982). It has recently been argued that PCNs cross-linguistically have mass-like substance denotations, establishing a modeltheoretic link between mereological structure and gradable PC meanings (Francez and Koontz-Garboden, 2013) (henceforth F&KG). This paper argues against such a link, and claims that data from Wolof suggest a contrary position: that PC lexemes, regardless of category, are characterized by denoting in *non-mereologically* ordered domains.

Empirical landscape Unlike a predicate nominal like *pokal* ‘strong person’ (3), a PCN is not predicated of individuals with a copula (4); nor does it predicate directly like a PCV (6). (N.B. the *na* element, glossed FIN, indicates present temporal orientation with PCVs.) Instead the possessive verb *am* ‘have’ is semantically required to achieve truth conditions when predicated of an entity. Thus a compositional PCN predicate like in *am doole* (5) looks indistinguishable from a possessed mass substance noun like *am ceeb* ‘have rice’ (7)

- (3) *Ali pokal* *la-∅* (4) **Ali doole* *la-∅* (5) *Ali am na-∅ doole*
 Ali strong.pers. COP-3SG Ali strength COP-3SG Ali **have** FN-3S strength
 ‘Ali is a strong person.’ Intended: ‘Ali is strong.’ ‘Ali is strong.’
- (6) *Awa rafet/*doole* *na-∅* (7) *Ali am na-∅ ceeb*
 Aliou pretty/*strength FIN-3SG Ali **have** FN-3S rice
 ‘Awa is pretty/*strong.’ ‘Ali has rice.’

According to F&KG, predication of PCNs via possessive morphosyntax is found in a wide array of unrelated languages and is consistent with PCNs having abstract mass substance denotations. In (7), composition with *am* supplies the semantically necessary possessive relation between the substance and individuals who have it, as reflected in the denotation in (8). In (8), *p* is a variable over portions of abstract matter, and **strength** a constant naming the substance strength in the model.

- (8) a. $[[doole]] = \lambda p.\mathbf{strength}(p)$ b. $[[am doole]] = \lambda x\lambda D^\uparrow.\exists^{D^\uparrow} p[\mathbf{strength}(p) \ \& \ \pi(x, p)]$
 D^\uparrow ranges over positive portions and restricts quantifier to elements of D^\uparrow .

This analysis has implications for the grammar of gradability and comparison of PCNs: F&KG note that while portions are ontologically distinct from degrees, they can be systematically related to scales. In many languages, mass nouns license gradable morphology (e.g. English (*so much; more*)), and in these cases measurement is monotonic on mass domains’ ordering under the mereological part-of relation (Schwarzschild, 2006; Wellwood et al., 2012). Thus, PCNs are expected to pattern exactly with other mass w.r.t gradable morphology, the only difference being the more ‘abstract’ nature of the quantified portions.

Against portions However, evidence from Wolof gradable constructions suggests that gradability is not linked to mereological structure with PCNs, unlike with mass nouns. First of all, qualitative intensifiers *lool* and *torop* (both meaning ‘very’) co-occur with both PCVs (9) and possessed PCNs (10), but not possessed substances (11) The reverse pattern obtains if the quantity adverbial *bu bëri* (consisting of *bu*, a relative marker, and *bëri*, a stative verb meaning ‘to be a lot’) is substituted for *lool* in (9)-(11).

- (9) *Awa rafet na-∅ (lool)* (10) *Awa am na-∅ xel (lool)* (11) *Ali am na-∅ ceeb (*lool)*
 Awa pretty FIN-3SG (very) Awa have FN-3S wit (very) Ali have FN-3S rice (*very)
 ‘Awa is (very) pretty.’ ‘Awa is (very) witty.’ ‘Ali has rice.’

Additionally, Wolof has two morphologically distinct exceed comparative constructions, which differ in their selectional restrictions. Bare PCNs only occur with the noun-selecting *ëpp* comparative, which measures quantity (12). Surprisingly, a *possessed* PCN can also freely occur with the qualitative *gën(-a)* comparative, which otherwise only selects for gradable PCV (13). Note that composition with *gën(-a)* is not available for possessed substance nouns like *ceeb* ‘rice’.

- (12) *Awa-a ëpp* $\left\{ \begin{array}{l} *rafet_{PCV} \\ doole_{PCN} \\ ceeb_N \end{array} \right\}$ *Aida* (13) *Ali-a gën-a* $\left\{ \begin{array}{l} rafet_{PCV} \\ \mathbf{am} doole_{PCN} \\ *am ceeb_N \end{array} \right\}$ *Aida*
 Awa-FOC EXC *pretty/strength/rice Aida Ali-FOC EXC pretty/ π strength/* π rice Aida
 ‘Awa is stronger/has more rice than Aida.’ ‘Ali is prettier/stronger than Aida.’

Conclusion: PC lexemes denote states I argue that the Wolof data challenges F&KG’s claim the the denotations of PCNs are modeltheoretically equivalent to substance nouns. I propose instead that Wolof PCNs denote **sets** of Davidsonian states, and PCVs denote **relations** between individuals and Davidsonian states (the latter is consistent with Anderson and Morzycki (2012)’s state-based analysis of gradable adjective denotations). Composition with *am* ‘have’ derives a predicate of individuals, type-theoretically equivalent to a PCV denotation.

I propose that states are ordered but *not* mereologically: as atoms and extensive parts are undefined for states, a state can only be ordered with respect to other states of its kind (e.g. Awa’s strength versus Aida’s strength) by intensity. PCNs still satisfy the grammatical conditions on mass nounhood by denoting non-atomic orderings. But the ontologically distinct nature of state and substance domains is clear in gradable contexts: substance measurement tracks mereological quantities, while state measurement tracks intensity along a qualitative dimension.

I conclude that Wolof provides important insights into the question of semantic variation in PC constructions, and challenges analyses of PCNs involving portions of abstract matter. The data support an enrichment of the semantic ontology with (Neo-) Davidsonian states and for treating property concept lexemes as a semantic natural class, unified in their reference to ordered state domains.

References

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