Countability shifts in the normative dimension

Introduction. This paper contributes a novel analysis focusing on countability shifts pertaining to normative qualities of social concepts like *lawyer* and *woman* (3). Such shifts have largely been overlooked, with discussions of countability typically focusing on the state of matter—i.e. as a substance that is portioned into containers or kinds or that is derived from grinding a physical object (e.g. Pelletier 1975, Rothstein 2010, among others). What has not yet been explained in the countability literature is how readings like those in (3), not pertaining to material state, arise. We build on theories of countability, social concepts, and polysemy, which we argue can be straightforwardly synthesized in order to capture the possibility of shifting the normative dimension of social concepts like *lawyer* and *woman* from count to mass.

Background. Two main sorts of countability shifts have been widely discussed since at least Pelletier (1975), namely those in which a mass noun like *mud* is shifted from referring to a substance to countable portion or kind thereof and those in which a count noun like *bicycle* is shifted from referring to a countable object to a substance resulting from the universal grinder. Rothstein (2010) assumes mass and count nouns are of different types, $\langle d, t \rangle$ and $\langle d \times k, t \rangle$, and the grinder shift is a matter of syntactic type shifting: when used in morphosyntax that only sanctions mass nouns, a lexically count noun, P, is shifted to a substance, mass interpretation of contextually determined minimal parts and their sums, but not whole contextually indexable atoms of P (1). Such shifts explain the felicity of (2) where something like ground up bicycle-stuff is assumed to be referred to given *bicycle* is used in mass noun sanctioning syntax.

(1) $\lambda P \lambda x. \exists y[y \in \boldsymbol{\pi}_1(P) \wedge x \sqsubseteq y \wedge \neg x = y]$ (Rothstein 2010, p. 392)

(2) After he had finished the job, there was bicycle all over the floor. (Rothstein 2010, p. 390)

What has neither been formally analyzed nor discussed as widely, to our knowledge, is what we call shifts in the normative dimension of human nouns like *woman, man,* and *lawyer* (3), where physical substance is not referred to, though physical-substance shifts do happen as well (4).

(3) a. You're too beautiful to ignore. Too <u>much woman</u>. (Star Trek, S. 1 E. 5)
    b. The lieutenant needs to watch and learn. And I'm to be the teacher. Make a man out of him, Colonel. Sir, he's already too <u>much man</u> and not <u>enough lawyer</u>. (JAG, S. 10 E. 15)

(4) Who knows what else they've done to the man? Or <u>how much man</u> is left at all.
    (Agents of Shield, S. 1 E. 16)

Analysis. We propose to analyze these shifts borrowing the semantic analysis of Dual Character Concepts (DCCs). DCCs are concepts that have both a normative and a descriptive dimension (Del Pinal & Reuter, 2017; Knobe et al. 2013), a typical example being *artist*: the criteria to belong to the category of artist can be either descriptive (e.g. dedicating most of the working time to create art) or normative (e.g. being committed to aesthetic values in a meaningful way). These two sets of criteria are independent, which leads to acceptance of statements like (5), where one set of criteria, but not the other, is satisfied (Knobe et al, 2013).

(5) There is a sense in which <u>she is clearly an artist, but</u> ultimately, if you think about what it really means to be an artist, you would have to say that <u>she is not an artist at all</u>.

Leslie (2015) argues *woman* and *man* are DCCs like *artist*, given the felicity of sentences like (6) in which the descriptive dimension of *man* and the normative dimension of the unstated *woman* are the relevant senses that make (6) true. Leslie also argues in favor of a polysemous representation rather than one that is ambiguous or an implicature based account because the former straightforwardly accounts for instances like (5) where both senses are used in the same context while using the latter requires more complex semantic machinery.

(6) Hillary Clinton is the only man in the Obama Administration. (Leslie 2015, p. 111)

We follow Pustejovsky (1998) in using dot objects to capture polysemy. In the present case, the relevant senses are the descriptive and normative dimensions of social role nouns like *woman, man, lawyer,* and *artist.* Dot objects, α, are defined as Cartesian products in which (7) holds, where R is a relation that holds of types, e.g. $\tau_1 \cdot \tau_2$.

(7) λx.y $\exists R[\alpha(x{:}\tau_1.y{:}\tau_2) : R(x,y)\ldots]$ (Pustejovsky 1998, p. 14)

For social terms like *woman,* we assume that the *HAS.ROLE* relation that holds over the two types, because, following Leslie (2015), the normative dimension is the social role people identified as a woman in the descriptive dimension are supposedly supposed to play. Integrating dot objects with the formalization of countability from Rothstein (2010), we represent the relevant characteristics of *woman* in (8), where the subscript k represents the application of the COUNT$_k$ operation to WOMAN, identifying members of WOMAN who count as one in k.

(8) λx.y [WOMAN$_k$(x:descriptive.y:normative) : HAS.ROLE(x,y)…]

Because the nouns in question are lexicalized as count nouns, both the descriptive and normative dimensions are indexed to countable individuals as seen in sentences like (5). This formalization also provides the needed semantics for sentences like those in (3) and (4) in which *much* and *enough N.SG,* which only sanction mass nouns, prompt the shifts of the social terms from their lexicalized count readings, referring to countable individuals, to mass readings. In (4) the shifted descriptive dimension refers to the undifferentiated stuff of which the individuals are physically made. In (3) the shifted normative dimensions of the respective nouns refer to the undifferentiated stuff that is derived from "grinding" the social roles of the respective referents.

Discussion. One major methodological and theoretical consequence of this analysis is the ability to make further progress in accounting for the non-canonical shifts of both count and mass nouns, namely that this can be done by using the tools already assumed in theories of countability and polysemy.

References

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