

THE RESTRICTION TO WELL-ESTABLISHED KINDS

Introduction. Generic nominals built on singular count nouns as in (4a) are restricted in a manner absent from such nominals built on uncountable or plural count nouns as in (4b–c). This is known as the restriction to well-established kinds (Krifka et al. 1995).

Under Dayal (2004), number-marking languages have the two operations in (1) for deriving kinds denoted by nominals, and only (1b) is restriction to well-established kinds. This restriction is unexplained in Dayal (2004), and we attribute it to $P_{\text{taxonomic}}$, as motivated by (5) showing that $\text{BOT-TLE}_{\text{taxonomic}}$ (*bottle* with the taxonomic reading) does not range over green bottles as a kind. Thus, the acceptability of (4b–c) is due to the kinds being derived via (1a), and the degradation of (4a) is due to the restriction of (1b) to well-established kinds.

- (1) a. $\lambda P \lambda s. \iota P_s$ (abbreviated ι) ‘the function from property P to the function from situations to the maximal element in the extension of P’
 b. $\lambda P. \iota(\lambda k. P_{\text{taxonomic}}(\mathbf{k}))$ ‘the function from property P to the maximal element in the set of (proper and improper) kinds of P’

The hypothesized universality of (1) in number-marking languages predicts the pattern in (4) to replicate in languages without definite articles. This is borne out in novel Polish data.

Data. In Polish, the three sorts of NPs under discussion can be bare kind-denoting, (6). They can also have post-nominal adjectives as in (7), which constitutes the crucial data with the pre-nominal adjectives in (8). The NPs in (7) denote well-established kinds, those in (8b–c) denote ad-hoc kinds, and (8a) is infelicitous in contrast to (7a) (Wągiel 2014:ex.14c, 15c).

Analysis. Inspired by Wągiel (2014), we posit the denotations in (2) of pre- and post-nominal *czarny* ‘black’ and *zwyczajna* ‘common’ (the latter omitted for space).

- (2) a. $\llbracket_{\text{pre-nominal czarny}}\rrbracket = \lambda P \lambda s \lambda x. P_s(x) \wedge \text{BLACK}_s(x)$
 ‘The function from properties P to the property of black instances of P.’
 b. $\llbracket_{\text{post-nominal czarny}}\rrbracket = \lambda \mathbf{J} \lambda k. \mathbf{J}(\mathbf{k}) \wedge \text{BLACK}(\mathbf{k})$
 ‘The function from sets of kinds \mathbf{J} to the subset of black kinds.’

For (7), we posit that (2b) and $\llbracket_{\text{post-nominal zwyczajna}}\rrbracket$ coerce the properties denoted by the nouns into sets of kinds. (2b) and $\llbracket_{\text{post-nominal zwyczajna}}\rrbracket$ then return sets whose respective maximal element is *Dryocopus martius* and *Triticum aestivum*, which is picked out by ι (covert in Polish), leading to predication over these well-established kinds in (7).

For (8), (2a) and $\llbracket_{\text{pre-nominal zwyczajna}}\rrbracket$ applying to the nominal properties yields (3).

- (3) a. $\llbracket_{\text{czarny dzięcioł}}\rrbracket = \lambda s \lambda x. \text{BLACK}_s(x) \wedge \text{WOODPECKER}_s(x)$ *non-cumulative*
 b. $\llbracket_{\text{czarne dzięcioły}}\rrbracket = \lambda s \lambda x. \text{BLACK}_s(x) \wedge \text{WOODPECKERS}_s(x)$ *cumulative*
 c. $\llbracket_{\text{zwyczajna pszenica}}\rrbracket = \lambda s \lambda x. \text{WHEAT}_s(x) \wedge \text{COMMON}_s(x)$ *cumulative*

(1a) (not limited to well-established kinds) applies to (3b–c) to yield (8b–c), which are about ad-hoc kinds as opposed to the well-established ones in (7b–c). However, ι in (1a) makes it inapplicable to (3a) (it is not the case that every extension of (3a) has a maximal element), and (1b) is inapplicable because the kind-correlate of (3a) is not well-established (the kind which instantiates all and only woodpecker specimens who are black). Thus, (8a) is infelicitous.

(7–8) follow from the hypothesized universality (in number-marking languages) of (1), along with the differences between (1a) and (1b) pertaining to well-established kinds.

Discussion. Dayal’s (1992) insight from comparing English and Hindi is that the exceptional behavior of singular count definite generics in English in comparison to bare NPs is due to the singular count noun rather than the definite article (which is absent in Hindi). Dayal (1992, 2004) does not check the predictions of her analysis for well-established kinds in languages without articles, and we show that they are borne out in Polish.

- (4) a. ??The green bottle has a narrow neck. *singular count* (Krifka et al. 1995:ex.24b)
 b. Green bottles (usually) have narrow necks. *plural count* (ibid. ex.25b)
 c. Gold which is hammered flat is usually opaque. *uncountable* (ibid. ex.25c)
- (5) Green bottles are a widespread #(kind of) bottle.
- (6) a. Dzięcioł wyginał w XXI wieku. ‘*Picidae* became extinct
 woodpecker_{sg} die-out_{perf.sg} in 21 century_{loc} in the 21st century.’
 b. Dzięcioły wyginęły w XXI wieku. ‘*Picidae* became extinct
 woodpecker_{pl} die-out_{perf.pl} in 21 century_{loc} in the 21st century.’
 c. Pszenica jest rozpowszechniona w Europie
 wheat_{sg} be_{sg} widespread in Europe_{loc} ‘*Triticum* is widespread in Europe.’
- (7) a. Dzięcioł czarny wyginał w XXI wieku. *singular countable*
 woodpecker_{sg} black_{sg} die-out_{perf.sg} in 21 century_{loc}
 b. Dzięcioły czarne wyginęły w XXI wieku. *plural countable*
 woodpecker_{pl} black_{pl} die-out_{perf.pl} in 21 century_{loc}
 ‘*Dryocopus martius* became extinct in the 21st century.’
 c. Pszenica zwyczajna jest rozpowszechniona w Europie *singular uncountable*
 wheat_{sg} common_{sg} be_{sg} widespread in Europe_{loc}
 ‘*Triticum aestivum* is widespread in Europe.’
- (8) a. #Czarny dzięcioł wyginał w XXI wieku. *singular countable*
 black_{sg} woodpecker_{sg} die-out_{perf.sg} in 21 century_{loc}
 b. Czarne dzięcioły wyginęły w XXI wieku. *plural countable*
 black_{pl} woodpecker_{pl} die-out_{perf.pl} in 21 century_{loc}
 ‘Woodpeckers which are black became extinct in the 21st century.’
 c. Zwyczajna pszenica jest rozpowszechniona w Europie *singular uncountable*
 common_{sg} wheat_{sg} be_{sg} widespread in Europe_{loc}
 ‘Wheat which is common is widespread in Europe.’

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