

Singulars in Disguise: A Semantic Analysis of Some Modified Plurals

1. The Problem: It is seemingly a fact of English that the indefinite article *a* may combine only with singular count nouns, such that we have for example *a horse*, but **a horses*, **a water*, **a Fred*, and so forth. But while nearly universally valid, this generalization fails to account for examples such as the following, where *a* combines with an apparently plural expression:

- (1) a. A lucky three winners will get all expenses paid trips to Maui
- b. An incredible ten thousand soldiers are thought to have died in the battle
- c. It's a good twenty miles to the store
- d. We spent a busy few weeks preparing for the expedition

In the present paper, I provide a semantic analysis of these unusual occurrences of *a*, present a surprising claim that follows, and extend the analysis to some superficially unrelated constructions.

2. The Analysis: As a starting point, I note that all of the examples in (1) are ungrammatical if the adjective is removed (e.g. **a three winners*), and likewise if *a* is not present (**lucky three winners*). Thus while plurals typically cannot be selected by *a*, when adjectival modification is present, *a* is mandatory. But then in this respect, modified plural expressions such as *lucky three winners* show precisely the behavior of singular count nouns, suggesting the possibility that they are in some sense singular.

In an analysis along these lines, Ionin & Matushansky (2004) make the important observation that in examples such as (1), the adjective must modify the noun phrase as a whole (e.g. *three winners*, *twenty miles*), as evidenced by the fact that adjectives that can only modify individual entities are prohibited from this construction, just as they are prohibited from appearing with collective nouns:

- (2) a. *I met a very tall five people the other day
- b. *I met a very tall committee the other day

But these authors fail to recognize one crucial fact: There is a subtle but real interpretive difference between constructions of the form *a + Adj + #/few + N* and those of the form *#/few + Adj + N*. Thus in (3a), the three days in question are each described as long, but they need not be contiguous (e.g. we could be talking about yesterday, last Saturday, and the Tuesday before that). But in (3b), the three days must be contiguous; it is a single unit of three days that has been described as long.

- (3) a. We spent three long days painting the house
- b. We spent a long three days painting the house

Similarly, the infelicity of (4b) in contrast to the acceptability of (4a) is evidence that in the former case, *eloquent few paragraphs* must be interpreted as a singular, indivisible unit.

- (4) a. The essay consisted of a few eloquent paragraphs separated by pages of gibberish.
- b. ??The essay consisted of an eloquent few paragraphs separated by pages of gibberish.

On this basis, I propose that expressions such as *lucky three winners* and *eloquent few paragraphs* are singular, in that they denote sets or predicates of singular (atomic) individuals. As such, they require an overt indefinite article, just like other singular expressions such as *horse*, *winner* or *paragraph*. (This proposal is distinct from that of Ionin & Matushansky 2004, which holds that numbers themselves are singular nouns morphologically and syntactically.)

To formalize this idea, I follow Link (1983) and Landman (2004) in extending the domain of individuals to include plural individuals, and in introducing the “group formation” operator \uparrow , which maps plural individuals onto the corresponding group atoms. I further assume an “adjectival” view of cardinal numbers as noun modifiers without inherent quantificational force (Landman 2004). Within this framework, (5a) provides the denotation of *three winners*, while (5b) gives that of *lucky*. (5c) then gives the semantics of *lucky three winners* as a predicate over atomic individuals, namely the property of being lucky and being the atomic counterpart of some plural individual made up of three winners. Finally, (5d) gives the full translation of (1a), where we assume that the expression in (5c) first undergoes existential closure, and then combines with the sentential predicate.

- (5) a. $\llbracket \text{three winners} \rrbracket = \lambda x [|x| = 3 \ \& \ *winner(x)]$
- b. $\llbracket \text{lucky} \rrbracket = \lambda x [\text{lucky}(x)]$
- c. $\llbracket \text{lucky three winners} \rrbracket = \lambda x [\text{lucky}(x) \ \& \ \exists y (|y| = 3 \ \& \ *winner(y) \ \& \ \uparrow y = x)]$
- d. $\llbracket \text{A lucky three winners will get all expenses paid trips to Maui} \rrbracket$
 $= \exists x [\text{lucky}(x) \ \& \ \exists y (|y| = 3 \ \& \ *winner(y) \ \& \ \uparrow y = x) \ \& \ \text{will-get-trips-to Maui}(x)]$

3. A Surprising Claim: The derivation in (5) provides a neat analysis of *lucky three winners* as a predicate over atomic individuals, thereby accounting for the requirement for a “unit” interpretation, as well as the obligatory appearance of *a*. However, it does not immediately follow that the constituent elements in this expression must combine in this manner. That is, why is it not possible for *lucky* to combine directly with a plural expression such as *three winners*, yielding a denotation of the following form, a predicate of plural individuals?

$$(6) \llbracket \text{lucky three winners} \rrbracket = \lambda x[\text{lucky}(x) \ \& \ |x| = 3 \ \& \ *winner(x)]$$

But (6) is equivalent to the denotation we might (as a first approximation) assign to *three lucky winners*, giving rise to the (incorrect) prediction that the two expressions should have the same interpretations.

The conclusion must be that in (1a), *lucky* cannot combine directly with the plural predicate *three winners*. As a way to account for this, I propose the following: The adjectives that may appear in the modified plural construction are inherently predicates of atomic (not plural) individuals, and thus cannot modify plural predicates.

On the surface, it seems that this claim cannot be true, since in an expression such as *three lucky winners*, *lucky* appears to modify a plural noun, *winners*. But as noted by Landman (2004), there are actually two ways that an intersective adjective may combine semantically with a plural noun: i) both adjective and noun may first be pluralized (such that they then denote predicates of plural individuals) and the resulting expressions combined via intersective modification (as in (7a)); or ii) a singular noun and adjective may combine intersectively, with the resulting expression then pluralized (per (7b)):

$$(7) \text{ a. } *lucky \cap *winner \qquad \text{b. } *(lucky \cap winner)$$

The above proposal amounts to the claim that the first of these options is not available; only the second is possible. In this view, *three lucky winners* actually has a denotation along the lines of (8), a predicate of plural individuals, which can be paraphrased as the property of having of three atoms each of which is a lucky winner:

$$(8) \llbracket \text{three lucky winners} \rrbracket = \lambda x[|x| = 3 \ \& \ *lucky-winner(x)]$$

It is only when a cardinal number or *few* intervenes that a different pattern emerges: In *lucky three winners*, *three* must first combine with *winners*, forcing the pluralization of the latter (since cardinal numbers are inherently predicates of plural individuals). But the resulting expression then cannot combine with an adjective such as *lucky*, since the former is a plural predicate while the latter is a singular predicate. To resolve this mismatch, *three winners* must be shifted via the group formation operator \uparrow to a predicate of singular individuals, which then is able to combine with *lucky*, as per the derivation in (5).

4. Some Extensions: My analysis of modified plurals can be extended to several other constructions that might initially appear unrelated. The first of these involves instances where *a* appears with a proper name (9) or a quotation (10). As in the case of modified plurals, the presence of adjectival modification in these constructions correlates with the obligatory presence of *a*.

(9) “The event exceeded our expectations,” said a proud Jim Smith, executive director.

(10) The children responded with a weary, “We know, Mom.”

A second case involves other occurrences of plural expressions in contexts that otherwise require a singular noun, such as following *every* (*every three days*) or *another* (*another few miles*). That these are related to the modified plural construction is suggested by two parallels: Both are possible with cardinal numbers and *few*, but not with *many* (**a lucky many winners*; **every many days*) or bare plurals (**a lucky winners*; **every days*). And both are particularly natural with expressions referring to entities that have a natural linear ordering (e.g., days or miles).

I will argue that these cases, like modified plurals, can be analyzed as involving singular expressions in disguise, a conclusion that increases the generality of the present analysis.

References

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