

Constructed dual in Hopi: A cyclic insertion approach

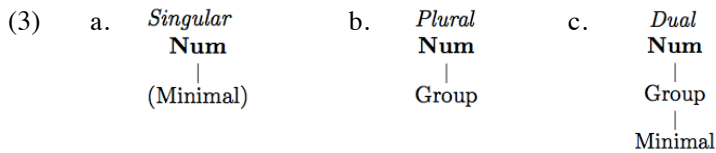
BACKGROUND. The ‘constructed dual’ phenomenon (cf. [2], [3], [4]), attested in Amerindian languages including Hopi, refers to the unusual expression of dual number by combining a plural noun with a singular verb, as shown in (1). The reverse pattern is not possible (2). In this paper, I propose that constructed duals arise from the cyclic insertion of Vocabulary Items (VI’s) at discontinuous terminal nodes, which share a single feature configuration via Agreement.

- | | |
|---|---|
| <p>(1) Puma wari
 That.PLrun.PERFV.SG
 ‘They (two) ran’</p> | <p>(2) *Pam yùutu
 That.SG run.PERFV.PL</p> |
| | ([4]:74) |

Previous accounts of the phenomenon have relied on the notion of feature markedness. According to [5], for example, constructed duals arise when a marked feature combination denoting dual—[-singular, -augmented]—triggers some post-syntactic feature-deletion prior to Vocabulary Insertion. However, on this analysis, the pronouns and verbs must undergo different types of feature-deleting operations in order to derive the “disagreeing” morphemes; specifically, impoverishment targets the feature [\pm augmented] on pronouns but the feature [\pm singular] on verbs. There is no principled explanation for this distinction.

PROPOSAL. I propose an alternative analysis in which the morphology more transparently reflects the syntax, involving no category-differentiating post-syntactic feature manipulation. I argue that the constructed dual presents a case of “combinatorial exponence” (cf. [1]), which involves the expression of a single feature category by distinct values *at the time of Vocabulary Insertion*.

First, following [4], I assume the feature-geometry in (3), which encodes markedness by the amount of structure present. Since dual is a combination of two dependent nodes (Group and Minimal), it is more marked than either plural or singular (which is the least marked, represented by the absence of nodes; the parentheses around Minimal to indicate its default status).



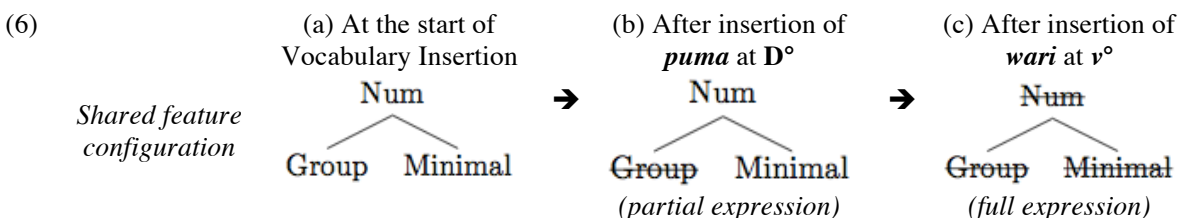
Moreover, I adopt the feature sharing view of Agree (cf. [6]): when Agree applies between a probe feature $F[]$ and a goal feature $F[val]$, the output is *a single valued feature $F[val]$ shared by the two locations*. Thus, Agreement in (1) will create a coalesced dual feature configuration. Vocabulary Insertion will operate relative to this shared representation, targeting the relevant discontinuous terminal nodes (the goal and probe) *bottom-up* and in a *cyclic* manner until all the component features (Group and Minimal) have been fully expressed. Crucially, this process is mediated by (4), to rule out (2).

- (4) **Maximal Expression Principle:** Insert the VI that expresses as *much* of the (as-of-yet unexpressed) target feature configuration as possible.

(4) will ensure that, given (5), the most specified—i.e., feature-geometrically most equivalent to dual—available VI will be inserted first at the D° node. That VI is *puma* $\leftarrow - \rightarrow$ [(3b) here].

- (5) *puma* $\leftarrow - \rightarrow$ [(3b) here]
pam $\leftarrow - \rightarrow$ [(3a) here]

This results in the *partial* expression of the shared dual feature configuration, as in (6b): only [Group] has been realized at the D° node. In order to express the remaining singular feature, a later insertion is required at the probe node: that of *wari*. The resulting structure is (6c). (The strikethroughs indicate feature *realization*, not discharge.)



CONCLUSION. The unusual agreement pattern of constructed duals was attributed to cyclic insertion, which realizes discontinuous terminal nodes that come to share a single feature configuration via Agreement. The proposed analysis unifies constructed dual formation with other phenomena of discontinuous exponence, which also have been shown to involve cyclic insertion (cf. [1]).

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