

Why dual is less marked than plural

Greenberg's (1963) Universal 34 states that no language has a distinctive dual unless it has a plural. Harley (1994), Ritter (1997), and Ritter & Harley (1998) capture this with the dependency structure in (1). However, the constructed dual (Corbett 2000), found in Hopi and Zuni (3), leads Harley & Ritter (2002) to adopt (2) instead. In (2), MINIMAL is two things: the default interpretation of INDIVIDUATION, and a marked feature affecting the interpretation of a structure including GROUP. In (3)d, the plural subject contributes GROUP, while the singular verb contributes MINIMAL, giving the dual interpretation.

This paper provides a Distributed Morphology analysis (Halle & Marantz 1993) of the constructed dual, accounting without further stipulation for the Zuni pronoun system (Newman 1965, Nichols 1997, Corbett 2000), avoiding the inconsistent use of features as both marked and default, and accounting for all observed pronominal syncretisms in Zuni. A crucial assumption (Trubetzkoy 1939; see also Drescher 2003), is that the interpretation of a linguistic element depends on the contrasts in which it participates. The unspecified vowel is realized as /i/ in (4)a, but as /e/ in (4)b, and a [BACK] vowel is realized as /u/ in (4)a, but as /o/ in (4)b. The same holds with number: the interpretation of a plural nominal as *more than one* or *more than two* depends on whether the language has a distinctive dual.

I argue for the dependency structure in (5), over those in (1) and (2). (5) accounts for Greenberg's Universal 34, and also embodies the insight that the meaning of the plural depends on how many number values the system contains. The specification of the dual in (5)a is identical to that of the plural in (5)b, with the narrow semantic range of the dual in (5)a arising from the fact that the [>1] feature in that system may have a dependent, [>2]. In both systems, the feature [>1] separates singulars (not >1) from non-singulars (>1). In (5)a, non-singulars are further divided into plurals (>2) and duals (>1 but not >2).

The crucial difference between (1) and (5) is the language-internal status of the dual. In (1), the dual in a three-way system is more marked than the plural, whereas in (5), the plural is more marked than the dual. Syncretisms in Zuni provide strong evidence for (5). Both systems permit syncretic dual/plural VIs that contrast with singulars ([>1] or [GROUP] vs. [#]). Only (5) can account for syncretic singular/dual VIs that contrast with plurals ([#] vs. [>2]), and only (1) permits syncretic singular/plural VIs that contrast with duals ([#] vs. [MINIMAL]). The constructed dual in Zuni, as shown in (6), can be analysed as involving a dual/plural syncretism in the subject (a VI spelling out [>1] contrasting with one spelling out [#]), along with a singular/dual syncretism in the verb (a VI spelling out [>2] contrasting with one spelling out [#]). The dual thus has the same subject form as the plural, and the same verb form as the singular. Nothing special need be said about the dual; it arises straightforwardly from the feature system in (5), and VIs spelling out the boxed features in (6).

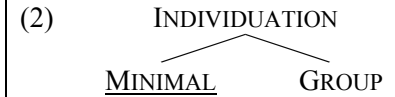
Zuni pronoun syncretisms, shown in (7), provide further evidence for this analysis. While the dual/plural syncretisms found in the subject pronouns are compatible with both (1) and (5), the partial dual/plural syncretisms in the nonsubject pronouns can be accounted for only with the system in (5).

I assume Harley and Ritter's (2002) person features, with third person unspecified, [PARTICIPANT] giving first person, and [ADDRESSEE] second person, with ADDRESSEE a dependent of PARTICIPANT. For Case, I follow Béjar and Hall (1999), with a bare case node [K] for subject case, and its two dependents [ACCUSATIVE] and [OBLIQUE] giving object and possessive case respectively. This gives (8) for the first and second person plural possessive pronouns *hoʔnʔa:wan* and *toʔnʔa:wan*.

Using the features in (5), the syncretic VIs *hoʔnaʔ* and *toʔnaʔ* are analysed as in (9), where X matches any dependent of [K]. This representation is compatible with the three contexts in which they appear. It is also compatible with the context in which *hoʔnʔa:wan* and *toʔnʔa:wan* appear, but is blocked there by the closer match provided by those VIs. Under (1), *hoʔnaʔ* and *hoʔnʔa:wan* have the representations in (10). This approach fails when the two VIs compete for insertion in the possessive dual, specified as [MINIMAL, OBLIQUE]. (10)b matches the possessive dual more closely than does (10)a, wrongly predicting the insertion of *hoʔnʔa:wan*. Because the dual is more marked than the plural, no representation for the plural will be incompatible with the dual. (1) thus requires two homophonous VIs *hoʔnaʔ* (and two VIs *toʔnaʔ*), one spelling out the accusative dual/plural, and the other spelling out the possessive dual. I conclude that (5) permits a more elegant account of the Zuni pronoun system, and of Corbett's constructed dual, than does (1). In addition, since (5) eliminates the inconsistent use of MINIMAL as both a default and a marked feature, it is also to be preferred to (2).

Why dual is less marked than plural

- (1) a. Three-way number system: b. Two-way system:
- | | | |
|--------------------|-------------------|--------------------|
| i. <u>Singular</u> | ii. <u>Plural</u> | i. <u>Singular</u> |
| # | # | # |
| | GROUP | GROUP |
| | GROUP | GROUP |
| | MINIMAL | |



- (3) Zuni
- | | | | |
|-----------------|--------------------|--------------------------|------------------|
| a. hoʔ ʔa:kya | b. hon ʔa:w-a:kya | c. ʔa:w-akcek(ʔi) ʔa:kya | d. hon ʔa:kya |
| 1.SG.NOM go-PST | 1.PL.NOM PL-go-PST | PL-boy go-PST | 1.PL.NOM go-PST |
| ‘I went.’ | ‘We (pl.) went.’ | ‘Two boys went.’ | ‘We (two) went.’ |

- (4) a.

i	u [Back]
a [Low]	

 b.

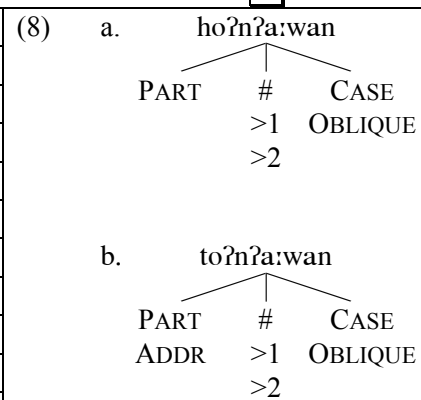
i [Hi]	u [Back, Hi]
e	o [Back]
a [Low]	

 (5) a. 3-way number system: b. 2-way number system:
- | | | | | |
|------------|------------|------------|------------|------------|
| <u>Sg#</u> | <u>Du#</u> | <u>Pl#</u> | <u>Sg#</u> | <u>Pl#</u> |
| | >1 | >1 | | >1 |
| | | >2 | | |

- (6) a. Singular: hoʔ ʔa:kya b. Dual: hon ʔa:kya c. Plural hon ʔa:w-a:kya
- | | | | |
|----|----|----|----|
| # | # | # | # |
| >1 | >1 | >1 | >2 |

(7)

		Subject		Object	Possessive	
		Medial	Final	Medial	Medial	Final
1	Singular	hoʔ	ho:ʔo	hom		homma
	Dual	hon	hoʔno	hoʔnaʔ	hoʔnʔa:w-an	
	Plural			hoʔnʔa:w-an		
2	Singular	toʔ	to:ʔo	tom		tomma
	Dual	ton	toʔno	toʔnaʔ	toʔnʔa:w-an	
	Plural			toʔnʔa:w-an		
3	Singular	--		ʔan	ʔa:ni	
	Dual	--		ʔa:čiyaʔ		
	Plural	--		ʔa:w-an		



- (9) a.

```

hoʔnaʔ:
├── PART # CASE
│   │   >1 X
│   └──
    
```

 b.

```

toʔnaʔ:
├── PART # CASE
│   │   >1 X
│   └── ADDR
    
```

- (10) a.

```

hoʔnaʔ:
├── PART # CASE
│   │   >1 X
│   └── GROUP
    
```

 b.

```

hoʔnʔa:w-an:
├── PART # CASE
│   │   >1 OBL
│   └── GROUP
    
```

References:

- Béjar, S., & D. C. Hall. 1999. Marking markedness. ESCOL, University of Connecticut
- Corbett, G. G. 2000. *Number*. Cambridge: Cambridge University Press.
- Dresher, B. E. 2003. The contrastive hierarchy in phonology. *Toronto WPL* 20: 47-62.
- Greenberg, J. H. 1963. Some Universals of Grammar. In *Universals of Language*, ed. J. H Greenberg, 73-113. Cambridge, Mass.: MIT Press.
- Halle, M., & A. Marantz. 1993. Distributed Morphology and the Pieces of Inflection. In *The View from Building 20*. eds. K. Hale and S. J. Keyser, 111-176. Cambridge, Mass.: MIT Press.
- Harley, H. 1994. Hug a Tree: Deriving the Morphosyntactic Feature Hierarchy. *MITWPL* 21:289-320.
- Harley, H., & E. Ritter. 2002. Person and number in pronouns. *Language* 78:482-526.
- Newman, S. 1965. *Zuni Grammar*. Albuquerque: University of New Mexico Press.
- Nichols, L. 1997. Topics in Zuni Syntax. Ph. D. Thesis, Harvard University.
- Ritter, E. 1997. Agreement in the Arabic Prefix Conjugation. *Proceedings of CLA*.
- Ritter, E., & H. Harley. 1998. Meaning in Morphology. Paper presented at GLOW, Tilburg.
- Trubetzkoy, N. S. 1939. *Grundzüge der Phonologie*. Prague: TCLP 8.