ASPECTS OF PLURALITY IN ǂHOAN

CHRIS COLLINS

Cornell University

In ǂHoan, nouns and verbs can be pluralized. This article investigates various syntactic and semantic aspects of plurality in ǂHoan: first, the formation of plurals of inalienable nouns, then, how the plurals of verbs (termed PLURACTIONAL VERBS) are formed in much the same way as the plurals of inalienable nouns. The phenomenon of pluractional verbs strongly supports the event argument analysis of verbal semantics.*

INTRODUCTION. The parallel between noun phrases and verb phrases has been a long-standing issue in generative grammar (Chomsky 1970). For example, it is generally held that both noun phrases and verb phrases fall under X′-Theory, and that similar types of movement can occur in noun phrases and verb phrases. But in spite of the many similarities between noun phrases and verb phrases, there are a number of recalcitrant differences. Introductory linguistics textbooks often note that verbs cannot be pluralized, and that this distinguishes nouns and verbs. I will argue here that in ǂHoan,[1] nouns and verbs can be pluralized. This will add a further dimension to the parallel that is often postulated between noun phrases and clauses (Abney 1987, Bernstein 2000, Szabolcsi 1984, 1994).

In particular, I will argue that the morpheme *kí* is an agreement morpheme (which I will gloss kí[pl]). In the nominal domain, it agrees with a plural inalienable noun. In the verbal domain, it agrees with a plural verb. A plural verb (often called a PLURACTIONAL VERB) is interpreted as repetition of the event (and so could be called iterative aspect).

This article owes much to the ideas and data in Gruber 1973, 1975a,b,c. Although this work builds on Gruber's in many ways, much of the data here were elicited during my own field work in Botswana in 1996–97, and the summer of 1999. My analysis differs from Gruber's (1975a) in the analysis of plural deletion, in the analysis of the kí[pl] agreement morpheme, and in adopting the Davidsonian treatment for the semantics of verbs.

1. INALIENABLE VERSUS ALIENABLE POSSESSION. Many languages have a distinction between alienable and inalienable possession. Alienable possession in ǂHoan is illustrated in 1.[2]

* This article would not have been possible without the help of Jeff Gruber, who made available to me his unpublished field notes and recordings and discussed the research in this article. Tony Traill provided valuable advice on doing Khoisan linguistics. Sandro Zucchi, Judy Bernstein, and two anonymous referees gave me valuable comments on earlier versions. Previous versions of this article were presented at Cornell (1997), the GLOW Workshop on Verb Typology in Asian and African Languages (Hyderabad, India, 1998) and in my courses on Khoisan syntax (1998, 1999). I would like to thank the government of Botswana for granting me a research permit to study ǂHoan. Lastly, I would like to express my gratitude to my two main informants, Titi Matshabanega and Leha Rasello (both from Mathibatsela, Botswana). The material in this paper is based on work supported by the National Science Foundation under grant no. SBR-9808256. This work was also supported by a Fulbright (CIES) grant during the academic year 1996–97.

[1] ǂHoan is a moribund Khoisan language spoken in southeastern Botswana. See Traill 1973a,b for the classification of ǂHoan amongst the Khoisan languages. See the appendix for an explanation of the phonetic symbols used. For general information on ǂHoan, see Bell & Collins 2001 and *http://ling.cornell.edu/khoisan/index.htm.*

[2] ǂHoan has no definite and indefinite articles. The translations of the examples in this article represent the definite interpretation.

(1) a. ǂ'amkoe ci kyeama
person POSS dog
'the person's dog'
b. tcon-!a'e ci kyeama-qa
people POSS dog-PL
'the people's dogs'

The main morphological indicator of alienable possession is the use of the morpheme *ci*. In 1, I give examples containing both a singular head noun (1a) and a plural head noun (1b). The issue of the plurality of the head noun will be fully discussed in §§1.3 and 2.

Inalienable possession is distinguished by the absence of *ci*; I give examples in 2 and 3.

(2) gya''m-si (*ci) !o
child-DIM POSS stomach
'the child's stomach'
(3) gya''m-si (*ci) gye
child-DIM POSS mother
'the child's mother'

In ǂHoan the class of inalienable nouns includes all body part terms, most kinship terms, some spatial relation terms, and some cultural artifact terms. This class corresponds roughly with the crosslinguistic characterization in the literature. I assume here (following Vergnaud & Zubizarreta 1992:596 and Gruber 1975a:40) that inalienable nouns differ from alienable nouns in that they take their possessor as an argument. Gruber says that 'inalienable nouns are themselves underlyingly predicates' (1975a: 40). In terms of theta-roles, *kyeama* 'dog' does not assign a theta-role to *ǂ'amkoe* 'person' in 1a, but *!o* 'stomach' in 2 does assign a theta-role to *gya''msi* 'child'.

In the rest of this section, I will give an overview of the different classes of inalienable nouns in ǂHoan; these are, basically, the Many-class, the Kin-class and the kí[pl]-class.

1.1. THE MANY-CLASS. The Many-class consists of nouns that refer to sets of objects that are naturally in a many-to-one relationship with their possessor. This class is illustrated by *gyo''ba* 'leaf' in ex. 4.

(4) a. |'on kí- gyo''ba
tree kí leaf
'the leaf of the tree'
b. |'on-qa kí- gyo''ba-(qa)
tree-PL kí leaf-PL
'the leaves of the trees'

Other nouns in this group include: *nǂu* 'feather', *kya''a* 'bone', *gu* 'flower', *n|u* 'vein'. Mass nouns are also in the Many-class: *tc'u* 'skin', *q|'i* 'blood', *‖a''e* 'meat'. It seems natural enough that mass nouns are in the Many-class, although I will not try to justify it formally here. There are a few examples that might be expected to belong to the Many-class, but don't. These include *tsiu* 'tooth', *n|a-n|a* 'branch' and *!ha'a* 'fragment'. All of these latter nouns belong to the kí[pl]-class, which will be discussed below.

The main morphological characteristic of the Many-class is that the morpheme *kí* is obligatorily used both when the head noun is singular (4a) and when the head noun is

plural (4b). Since my focus will be the kí[pl] class, I will not go into any further detail on the Many-class.

1.2. THE KIN-CLASS. The Kin-class is defined morphologically by the absence of any morpheme (such as *kí* or *ci*) intervening between the possessor and the head noun. Examples are given in 5.

(5) a. gya''m-si gye
child-DIM mother
'the child's mother'
b. gya''m-|a'a gye-qa
child-DIM.PL mother-PL
'the children's mothers'

Other members of this class include: *kyxana* 'uncle', *q‖o'e* 'child', *jiu* 'wife' and *ja* 'husband'. See Gruber 1973 for much more information on kinship terms in ǂHoan.

1.3. THE kí[pl]-CLASS. The largest and most interesting class is what I call the kí[pl]-class for the simple reason that if the head noun is plural, then *kí* is used (which I gloss as kí[pl] for reasons that will become clear in a moment). Several examples are given in 6.

(6) a. gya''m-si !o
child-dim stomach
'the child's stomach'
b. gya''m-|a'a kí- !o-(*qa)
child-dim.PL kí[pl] stomach-PL
'the children's stomachs'

(7) a. ⊙'u 'm⊙un
duiker head
'the duiker's head'
b. ⊙'u-qa kí- 'm⊙un-(*qa)
duiker-PL kí[pl] head-PL
'the duikers' heads'

The kí[pl]-class contains all body parts, some cultural artifacts, and some spatial relation terms (postpositions). I will return to a detailed treatment of postpositions in §3. Some nouns that belong to the kí[pl]-class are: *'m⊙un 'm⊙oa* 'brain', *q!'on* 'nose', ǂ*xui* 'breast' (of nonhuman animal), *khya* 'neck', *q!'on* 'heart', *‖hon* 'trunk', *ku* 'smell', *cin* 'door, mouth', *kui* 'liver', *!'ui* 'spine', ⊙*xui* 'tail', *n|o''o* 'throat', *g|o'e* 'chest' (of a nonhuman animal), *ng!a''ma* 'chest' (of humans), *zina* 'chin', *!xanu* 'palate', *tc'one* 'body', *tca'na* 'waist', *tsela* 'tongue', *g!oxolo* 'adam's apple', *'n‖a''a* 'manner'. Some cultural artifacts are: *‖ha''a* 'blanket', *!oa* 'house', *q|on* 'hat', *|oam* 'bat', *g‖ama* 'knife'. Some spatial relation terms are: *na* 'in', *za* 'by', *q!a'ne* 'near to', and *tc'one* 'surface'. As should be clear, the kí[pl]-class is the unmarked class for inalienable nouns. Any inalienable noun that does not belong to the Many-class or the Kin-class (both of which are rather small), will belong to the kí[pl]-class. The claim that the kí[pl]-class is the unmarked class is supported by the fact that kí[pl] generalizes to verbs (see §§4, 5 and 6).

What is the status of *kí* in exx. 6b and 7b? The first question is whether the constituent structure *gya''m-|a'a kí !o* 'the children's stomachs' is [[children kí] stomachs], or [children [kí stomachs]. The question is difficult to answer because of the fact that, except for the prenominal possessor, the noun phrase is strictly head initial (so all

modifiers follow the head noun). Clear evidence comes from the analysis of pluractional verbs (see §4, discussion of 24). This evidence suggests strongly that kí[pl] is a prefix, which is the analysis I will adopt. The fact that kí[pl] is always left adjacent to a noun stem is consistent with this claim. For example, numerals (*!xoa ʘoa* 'house two'), demonstratives, and relative clauses all follow the head noun, and therefore do not intervene between kí[pl] and the head noun.

Syntactically, one possible analysis is that kí[pl] indicates agreement of the head noun with the plural possessor. It is easy to show this analysis is not correct. Consider 8:

(8) a. ǂ'amkoe !oa
person house
'the person's house'

b. tcon!a'e !oa
people house
'the people's house'

c. tcon!a'e kí- !oa-(qa)
people kí[pl] house-PL
'the people's houses'

In 8b, even though the possessor is plural, no kí[pl] is used. This shows that kí[pl] cannot be a marker of agreement with the number of the possessor. Ex. 8c shows that a requirement of using kí[pl] is that the head noun is plural; 8c means the same thing with or without the plural *-qa*. This is the phenomenon of plural deletion, to which I will return in §2.

Now consider 9, where the possessor is singular.

(9) a. ǂ'amkoe kí- !oa-*(qa)
person kí[pl] house-PL
'the person's houses'

b. ǂ'amkoe kí- 'mʘun-*(qa) 'ee
person kí[pl] head-PL it.is
'Here are the person's heads.'

c. gya''m-si kí- /oam-*(qa)
child-DIM kí[pl] sack-PL
'the child's sacks'

In 9a, one person owns several houses, in 9b, one person has several heads (a kind of monster), and in 9c the child owns several sacks. In these examples, the head noun is plural, and kí[pl] is used. Note that the plural suffix *-qa* cannot be dropped in 9. I return to this fact in §2, when discussing plural deletion. These examples once again indicate that *kí* is not in agreement with a plural possessor (since the possessor is singular).

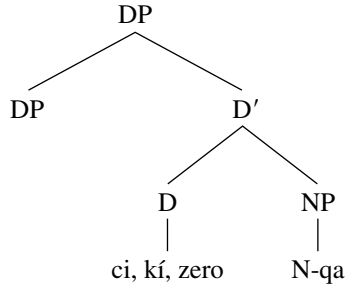
The data in 8 and 9 show that kí[pl] can only be used when the following head noun is plural. For this reason, I suggest that kí[pl] agrees with a plural head noun. In terms of agreement, kí[pl] is similar to the French possessive pronoun *ses* in the phrase *ses livres* 'his books'. In French, the possessive pronoun agrees in number and gender with the head noun. The difference between French and ǂHoan is that in ǂHoan, kí[pl] is not a possessive pronoun. Because of this agreement analysis, I will henceforth use the gloss kí[pl].

Given that kí[pl] agrees with the following plural noun, the next question is what syntactic head does kí[pl] occupy. One fact relevant to this question is that it only appears in the nominal domain when there is a possessor. This is illustrated in 10.

(10) (*kí-) !oa-qa
kí[pl] house-PL
'houses'

Ex. 10 shows that kí[pl] cannot be used in the plural of *!oa* 'house' when there is no possessor (compare to 8 and 9). My analysis of possessive structures is along the lines of Abney's DP analysis (1987:78; see also Bernstein 2000), and can be represented by the structure in 11.[3]

(11)



If the head noun is an alienable noun, then D must be filled by *ci* (see 1). *Ci* actually mediates the possession relation between the DP in the specifier position and the head noun. In other words, I am suggesting that *ci* assigns a (very general) theta-role to its specifier. Since inalienable nouns assign a theta-role to their possessors, there is no need for *ci* to appear. These elementary considerations go some way toward explaining the fact that in many languages (Ewe, for example) alienable possession involves at least as much morphological structure as inalienable possession.

The structure in 11 is consistent with the assumption that kí[pl] is a prefix on the head noun. I assume that kí[pl] satisfies its morphological requirement at PF. Employing the assumptions of Halle and Marantz (1993:134), one may say that kí[pl] and N are merged under adjacency (a modern version of affix hopping).

If the head noun is an inalienable noun, then it can be assumed that nothing but agreement (with the head noun) occupies D. If the inalienable noun N is in the Many class, then D is realized as *kí* for both singular and plural head nouns (see 4) (the *kí* found with nouns in the Many-class is not kí[pl]). If N is in the Kin-class, then D is realized as morphologically zero for both singular and plural head nouns (see 5). If N is any other type of inalienable N (the default case), then D is zero for a singular head noun, and kí[pl] for a plural head noun.[4]

Using Chomsky's system (2000:101, 122), the above account can be formalized as follows: I assume that D contains uninterpretable agreement features for number and class (Many-class, Kin-class, kí[pl]-class). These features enter into an Agree relation with the number and class features on the following N.

There are no other elements that fill the D position in ǂHoan. In particular, ǂHoan does not have any definite or indefinite articles of the type we find in English.

[3] For an early discussion of the role of functional projections in syntactic theory see Chomsky 1986. A more articulated syntactic analysis of the DP in ǂHoan would have the number morpheme head its own projection: [$_{\text{NumP}}$ NP Num] (see Aboh 1999 for much discussion). I leave out this functional projection as well as a number of others, since they are not directly relevant to the issues I am discussing.

[4] Agreement between the head noun and a possessive morpheme is common crosslinguistically. See for example, Carstens 1991 on Swahili and especially Traill 1994 on !Xóo.

2. PLURAL DELETION. I have analyzed kí[pl] as agreement with a plural head noun. There are several examples that appear to be problematic for the agreement analysis of kí[pl].

(12) a. tcon!a'e kí- !oa-(qa)
people kí[pl] house-PL
'the people's houses'
b. gya''m-|a'a kí- !o-(*qa)
child-DIM.PL kí[pl] stomach-PL
'the children's stomachs'

In 12a, the plural suffix *-qa* is optional. In fact, there is a definite preference to not use the plural suffix *-qa* in 12a. In 12b, it is not possible to have the plural suffix *-qa*. The data in 12 show that the head noun can be plural semantically (see the gloss), even when the plural suffix *-qa* is absent (optionally in 12a and obligatorily in 12b).

Recall that the data in 8 and 9 show that kí[pl] can be used only when the following head noun is plural. This fact motivated me to postulate that kí[pl] agrees with the following plural head noun. The data in 12 pose a problem for the theory that kí[pl] agrees with a plural head noun. If there is no plural suffix *-qa*, then what is kí[pl] agreeing with?

I would argue that the plural suffix on the head noun is present underlyingly but is deleted. This analysis captures the fact that the head noun is interpreted as plural, even though the plural morpheme is absent. The deletion analysis also accounts for the presence of kí[pl] in examples like 12a and 12b. In the rest of this section, I will investigate the syntax and semantics of plural deletion.[5]

Begin with the generalization that plural deletion is possible only when the possessor is plural. Recall the data in 9 (9a is repeated as 13).

(13) ǂ'amkoe kí- !oa-*(qa)
person kí[pl] house-PL
'the person's houses'

Another generalization: the plural marker *-qa* can be deleted only when kí[pl] is present. Consider 14, an example involving alienable possession.

(14) ma 'a- tsi tcon!a'e ci koloi-*(qa)
I PROG see people POSS truck-PL
'I see the people's trucks.'

Although the possessor is plural, it is not possible to delete the plural suffix *-qa*. The same point can be shown with kinship terms, as in 15.

(15) tcon!a'e 'a- tsi tsi gye-*(qa)
people PROG see 3PL mother-PL
'The people see their mothers.'

Exx. 14 and 15 illustrate that if kí[pl] is not present, then no plural deletion is possible.

I turn now to semantic properties of plural deletion. First, for pronominal reference, a noun phrase that has had the plural suffix *-qa* dropped can be the antecedent of a plural pronoun. This is shown in 16.

[5] Plural deletion is also possible in Ewe, and many other languages. It remains to be seen whether the analysis I give for ǂHoan can be carried over to these other languages. Plural deletion seems qualitatively different from the kind of variable plural marking discussed in Mithun 1988:226. For example, plural deletion in ǂHoan requires a possessor.

(16) Jefo ‘n‖au‘n‖auga -‘a tcon!a’e kí- !oa-(qa), tc’eo ki-cu tsi
Jeff repair PERF people kí[pl] house-PL make cause-beautiful 3PL
(*ya)
(*3SG)
‘Jeff repaired the people’s houses and made them beautiful.’

In 16, even if the plural suffix *-qa* in the antecedent to the pronoun is deleted, the plural pronoun *tsi* ‘they’ is still used.

It is important to note that even though the plurality of the possessor is what allows the plural suffix *-qa* to drop (see 12 and 13), the cardinality of the group referred to by the possessor and the group referred to by the head noun (or whole NP) do not have to be identical. Consider 17:

(17) tcon!a’e kí- !oa-(qa)
people kí[pl] house-PL
‘the people’s houses’

The noun phrase in 17 can be used to describe a situation where three people own the first house, a different person owns the second house, and yet a third person owns the third house. In other words, there are five people but only three houses. Seventeen can also be used to describe a situation where the first person owns three houses, the second person owns a different house, and the third person owns yet a different house. There are three people, but five houses.

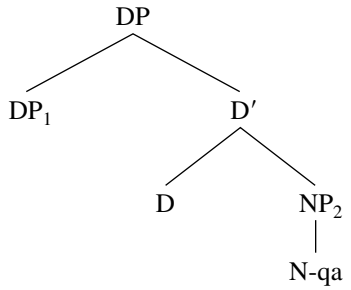
The only case where the cardinality of the possessor normally matches the cardinality of the head noun is certain body parts, illustrated in 12b, repeated here as 18.

(18) gya’’m-|a’a kí- !o-(*qa)
child-DIM.PL kí[pl] stomach-PL
‘the children’s stomachs’

Interestingly, it is in precisely this case that plural deletion seems obligatory. At present I have no explanation for the difference between optional plural deletion (12a, 16, 17) and obligatory plural deletion (12b, 18).

How can plural deletion be accounted for? Descriptively, plural deletion takes place when the possessor is plural and kí[pl] is present. I suggest—tentatively—that plural deletion is the result of deletion under identity with the plural morpheme of a plural possessor. Given this analysis, consider once again the syntactic structure we are working with.

(19)



Suppose that DP_1 is singular. The plural *-qa* cannot be deleted, since there is no antecedent that triggers the deletion. Suppose DP_2 is plural and kí[pl] occupies D. Then the plural suffix *-qa* can be deleted under identity with the plural feature of DP_1.

Suppose that DP_1 is plural, but kí[pl] is not present (as in the case of kinship terms or alienable possession). Then the conditions for deletion are not met.[6]

In §4 (see 29 and 37) I will show that plural deletion is not possible in the verbal system. This fact will follow directly from the account given above.

3. POSTPOSITIONS. Locative postpositions are nominal in ǂHoan,[7] so it is unsurprising that they can appear with kí[pl]. Consider 20 (Gruber 1975a:16 discusses essentially the same paradigm, but with a different postposition).

(20) a. kyeama ‘a ki koloi na
dog COP PREP truck in[8]
‘The dog is in the truck.’

b. kyeama-qa ‘a ki koloi na
dog-PL COP PREP truck in
‘The dogs are in the truck.’

c. kyeama-qa ‘a ki koloi-qa kí- na
dog-PL COP PREP truck-PL kí[pl] in
‘The dogs are in the trucks.’

In 20a one dog is in one truck; in 20b a number of dogs are in one truck. If the dogs are distributed in some way across several different trucks, sentence 20c must be used.

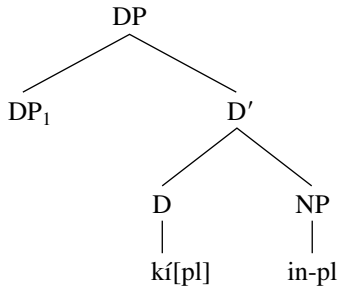
In keeping with the analysis of inalienable nouns presented above, I give the following analysis for postpositions: when kí[pl] precedes a postposition (as in 20c), this implies that the postposition is being pluralized. We can interpret this as meaning that there are several locations, each defined by the inside of some truck, such that at least one dog is at each of those locations (see 23 for an additional interpretation).

A problem with this account is that it is never possible for a postposition to be followed by a plural suffix *-qa* (or any other plural suffix in ǂHoan, see Gruber 1975a: 39).

(21) koloi-qa kí- na-(*qa)
truck-PL kí[pl] in-PL

I propose that plural deletion is obligatory with postpositions, just as it was with certain body parts (see 12b, 18). Given this assumption I have the following diagram for 21:

(22)



[6] Note that if kí[pl] were not present, and if *-qa* were deleted, then the resulting structure would be identical to a singular noun phrase with a plural possessor

[7] One piece of evidence for this is the following. There are two forms of the first singular pronoun: *ma* and *‘am*. The latter is the genitive form (used for the possessor of a noun). Postpositions also select the genitive form: *‘am na* ‘in me’. Given the analysis of postpositions as nouns, a more accurate translation of *na* in 20 may be ‘interior’ or ‘inside’.

[8] ǂHoan has two prepositions: *ki* (not to be confused with kí[pl]) and *ke* ‘with’. The preposition *ki* appears before a wide range of noun phrases: instruments, the second object in a double object construction, and

Recall that postpositions are nominal in nature, so I represent them as N. DP_1 is 'trucks'. The plural morpheme on the postposition is deleted (obligatorily, just as with certain body parts, §2). I should point out that in Ju|'hoan there are examples where a postposition seems to take a plural affix (see Snyman 1970:107). This seems to offer additional support for the idea that a postposition can be pluralized.

The ǂHoan data have clear implications for the semantics of locative postpositions. It is tempting to analyze *na* 'in' in 20 as a two-place relation that is true of a pair (x,y) just in case x is in y. The data from ǂHoan however, suggest that this analysis is not correct. Recall that in ǂHoan postpositions are nominal and can be pluralized (as shown by the presence of kí[pl]). These two facts suggest that postpositions should be analyzed in the same way as inalienably possessed nouns. Consider the phrase *the child's stomach*: we want to say that *stomach* is a two-place relation between children and stomachs. In other words, *stomach*(s, c) is true, just in case s is the stomach of the child c. Similarly, for postpositions, we want to say that *na* 'in' is a two-place relation between things and locations. In other words, *in*(l, t) is true just in case the truck t has the inside l (or that the location l is defined by the inside of the truck t). Analyzing *na* 'in' as a two-place relation that is true of a pair (x, y) just in case x is in y would completely miss the parallel between inalienable nouns (such as body parts) and locative postpositions.

Now consider the ungrammatical sentences in 23 in light of the above analysis.

(23) a. *kyeama-qa 'a ki koloi kí- na
dog-PL COP PREP truck kí[pl] in
b. *kyeama 'a ki koloi kí- na
dog COP PREP truck kí[pl] in
c. *kyeama 'a ki koloi-qa kí- na
dog COP PREP truck-PL kí[pl] in

Exx. 23a,b are unacceptable, since one truck cannot define several locations. Ex. 23a is unacceptable even in the situation where there are little miniature dogs hidden all over the truck; 23b is unacceptable even if dog meat is distributed around the truck.

Sentence 23c is normally unacceptable, since it is impossible for a single dog to occupy several trucks at the same time, though there is a reading (which is slightly difficult for the informants to get) where 23c is OK. Suppose there is a group of trucks, and you know the dog is in one of the trucks, but you don't know which one. Then it is possible to use 23c. This reading is consistent with my theory of kí[pl], since even in this reading there are several locations (so *na* 'in' has been pluralized), you just do not know at which of these locations the dog is located.

4. PLURACTIONAL VERBS. In ǂHoan it is possible to form the plural of a verb (see Gruber 1975a,b,c).

(24) a. ya 'a- kí- kini-q‖o ʘ'u
3SG PROG kí[pl] want-around duiker
'He is looking around for a duiker.'
b. Jefo kí- tchi-tcu -'a ʘ'u ki ‖a''a-qa
Jeff kí[pl] shoot-REP PERF duiker PREP arrow-PL
'Jeff shot at the duiker with arrows.'

In 24a, the verb is *kini* 'want, look for'. The form kí-V-q‖o gives the sense of 'looking

locative phrases. In Collins 2001, I argue that *ki* assigns (nongenitive) Case to the following noun phrase. In other words, in 20a *ki* assigns Case to [koloi na].

around'. In 24b, the form kí-V-tcu gives the sense of repeated action. In both examples, there is some verb that is a predicate of events (see Davidson 1980), and the modified form of the verb is a predicate of sums or sets of events.

These sentences also illustrate the aspectual suffixes in ǂHoan: the progressive (the prefix *a-*)[9] and the perfect (the suffix *-a*). In the example 24a, kí[pl] appears between the progressive prefix and the verb stem. This strongly suggests that kí[pl] is a prefix when preceding verbs and this is why I assume that kí[pl] is a prefix when preceding nouns.

In some cases a nonpluralized verb can be used in the same situations as a pluralized verb, as in 25.

(25) a. ya 'a- kini ʘ'u
3SG PROG want duiker
'He is looking for a duiker.'

b. Jefo tchi -'a ʘ'u ki ǁa''a-qa
Jeff shoot PERF duiker PREP arrow-PL
'Jeff shot at the duiker with arrows.'

Sentence 25a can be said in the same situation as 24a, that is, somebody is looking around (in different places) for a duiker. With other verbs, the sentences containing a nonplural V and kí-V-qǁo are not equivalent, as with the verb *kya''o* 'go'. I assume that this is due to the lexical semantics of the verb, in ways that I will not explore. Similarly, 25b can be used in situations where 24b can be used.

Constructions like those in 24a and 24b are often referred to as pluractional verbs, a term coined by Newman: '. . . the essential semantic characteristic of such verbs is almost always plurality or multiplicity of the verb's action' (Newman 1990:53). Brooks (1992) reports pluractional verbs in all the major language families of Africa. Lasersohn (1995) reports that pluractional verbs are found in Native American languages, Dravidian languages, and Chadic languages. Mithun (1988) describes the use of plural verbs in a number of Native American languages. Pluractional verbs include the verbal category of distributives discussed for Native American languages (see Lasersohn 1995: 238, 264, see also Mithun 1988:217).

What seems relatively unique about ǂHoan is that it has five different types of pluractional verbs: kí-V-qǁo (see section 4.1), kí-V-tcu (see §4.2), verb suppletion (§6), V-n|e, and reduplication (I do not discuss the latter two here for lack of space; see Mithun 1988:217 on other languages exhibiting an 'exuberance of verbal number markers'). The other unique aspect of ǂHoan is the curious role that the agreement morpheme kí[pl] plays in both the nominal and verbal domain.

It is also possible for adjectives to be pluralized in ǂHoan. The plural form of an adjective is kí-Adj, which can be used when the subject of the clause is plural (see Gruber 1975a). I believe that kí in this construction is also the agreement morpheme kí[pl]. I will not discuss this construction for reasons of space.

In the rest of this article, I will investigate the syntax and semantics of pluractional verbs, and the relationship between pluractional verbs and the plurals of inalienable nouns.

4.1. kí-V-qǁo. Kí[pl] is not sufficient by itself to make a verb plural. This is shown in 26.

[9] One piece of evidence that the progressive is a prefix is that it can never be separated from the verb stem by preverbal adverbs.

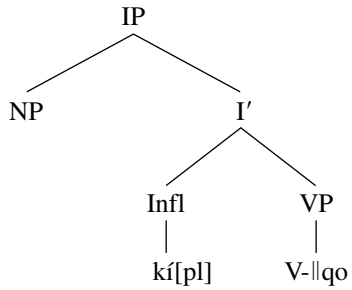
(26) a. Jefo ‘a- kí- kya’’o-q‖o
Jeff PROG kí[pl] go-around
‘Jeff is walking around.’
b. *Jefo ‘a- kí- kya’’o
Jeff PROG kí[pl] go
c. *Jeff ‘a- kya’’o-q‖o
Jeff PROG go-around
(27) a. Titi ‘a- kí- ‘am-q‖o
Titi PROG kí[pl] eat-around
b. *Titi ‘a- kí- ‘am
Titi PROG kí[pl] eat
c. *Titi ‘a- ‘am-q‖o
Titi PROG eat-around

Example 26a can be said if Jeff is just walking around, perhaps to different shops; 27a can be said if Titi is eating in several different villages in one day, or perhaps at several different places in one village.

We can account for the unacceptability of 26b and 27b by postulating that kí[pl] is an agreement morpheme that agrees with a following pluralized verb. In other words, in a kí-V-q‖o construction, the morpheme *q‖o* ‘around’ is a plural morpheme. Recall that kí[pl] requires the presence of a plural morpheme with inalienable nouns as well (see ex. 9). This parallel in form and meaning between nouns and verbs constitutes strong evidence that the same kí[pl] is being used in both cases.

I can represent 26a and 27a to a first approximation as 28.

(28)



In this diagram, Infl stands for inflection, and IP is a projection of Infl. This is the standard representation of the clause in the principles-and-parameters framework. Infl is occupied by the agreement morpheme kí[pl] which agrees with the plural verb V-q‖o. The choice of Infl as the functional head that kí[pl] occupies is somewhat arbitrary. An alternative might be Agr or Pred (as in the theory in Bowers 1993). I cannot further pursue the issue for reasons of space.[10]

A striking differences between plural of inalienable nouns and plurals of verbs is that plural deletion is not allowed with verbs (see §2).

(29) ci ‘a- kí- kini *(-q‖o) ⊙‘u-qa
3PL PROG kí[pl] want around duiker-PL
‘They are looking around for duikers.’

[10] I assume that the progressive prefix *-a* and perfective suffix *-a* head the functional category Asp. Furthermore, I assume that the aspectual affixes become attached to the verb stem either by head movement or by morphological merger (see Halle & Marantz 1993). Since these issues are not directly relevant to the my analysis, I will not discuss them here.

The sentence in 29 shows that the plural suffix *-q‖o* can never be dropped, even if both the subject and the object are plural. Sentence 29 should be compared to the examples in 12, which show that it is possible to delete the plural morpheme on the head noun if the possessor is plural. The question is why the plurality of the subject or object is not sufficient to allow the plural suffix *-q‖o* on the verb to be dropped (whereas the plurality of the possessor is sufficient to allow the plural suffix *-qa* on an inalienable noun in the kí[pl]-class to be dropped). A possible explanation is that a plural morpheme on a noun and a plural morpheme on a verb do not count as identical, so it is not possible to delete the plural suffix *-q‖o* on the verb under identity with the plural suffix on the subject (see the analysis of plural deletion, §2).

The basic meaning of kí-V-q‖o is that there are several different places at which the event or action is sequentially repeated. We can formalize this using the system developed by Lasersohn (1995).

(30) Let X be a set of events,
kí-V-q‖o(X) iff
a. Card(X) $>$ 1, and
b. For all e in X, V(e), and
c. For all e_1, e_2 in X, T(e_1) and T(e_2) do not overlap, and
d. There exist e_1, e_2 in X,
such that P(e_1) and P(e_2) are different.

In this definition, T is a temporal trace function and P is a spatial trace function (Lasersohn 1995:202). Basically what this definition comes down to is that kí-V-q‖o is true of a sequence of two or more events that occur in at least two different places.[11] I have not investigated the question of whether P(e_1) and P(e_2) should be disconnected (rather than merely different).

The fact that the events must occur in at least two different places can be illustrated by the sentences in 31.

(31) a. *Titi i kí- ‘am-q‖o ki ci m⊙un
Titi PAST kí[pl] eat-around PREP place one
b. *ya ‘a- kí- kini-q‖o ⊙’u ki ci m⊙un
3SG PROG kí[pl] want-around duiker PREP place one
c. *kyeama i kí- ciu-q‖o ki ci m⊙un
dog PAST kí[pl] dig-around PREP place one

In all three examples, the presence of the adverbial expression ‘in one place’ makes the sentence unacceptable.

If the subject of the sentence is plural, there still must be a sequence of events. Consider 32 and 33.

(32) tsi i kí- ‘am-q‖o
3PL PAST kí[pl] eat-around
‘They ate around.’
(33) tsi ‘a- kí- n|obo-q‖o ke tcon!a’e
3PL PROG kí[pl] talk-around with people
‘They are going around talking to people.’

Sentence 32 cannot mean that Chris ate in one place, Titi ate in another place and

[11] It should be possible to recast these and all other definitions in this article in terms of sums instead sets, see for example Landman 1996 and Link 1987. For the purposes of this article the set/sum distinction is not important.

Leha ate in a third place. It can only mean that they went around eating (separately or together) in different places, just as 33 can only mean that they are going around (separately or together) talking to different people. It cannot mean that each of them is talking to a different person in a separate location.

4.2. kí-V-tcu. Some examples of the kí-V-tcu construction are given in 34 and 35.

(34) a. Jefo kí- q‖'ao-tcu -'a ǂ'amkoe
Jeff kí[pl] stab-REP PERF person
'Jeff stabbed the person repeatedly.'

b. *Jefo kí- q‖'ao -'a ǂ'amkoe
Jeff kí[pl] stab PERF person

c. ?Jefo q‖'ao-tcu -'a ǂamkoe
Jeff stab-REP PERF person

(35) a. Jefo kí- tchi-tcu -'a ⊙'u ki ‖a''a-qa
Jeff kí[pl] shoot-REP PERF duiker PREP arrow-PL
'Jeff shot at the duikers repeatedly with arrows.'

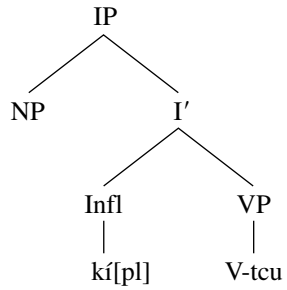
b. *Jefo kí- tchi -'a ⊙'u ki ‖a''a-qa
Jeff kí[pl] shoot PERF duiker PREP arrow-PL

c. ?Jefo tchi-tcu -'a ⊙'u ki ‖a''a-qa
Jeff shoot-REP PERF duiker PREP arrow-PL

In these examples, one person is performing several repetitions of an action on one thing. We can account for the unacceptability of 34b and 35b by postulating that kí[pl] is an agreement morpheme that agrees with a following pluralized verb. In other words, in a kí-V-tcu construction, the morpheme *-tcu* 'repetition' is a plural morpheme (compare 34b and 35b to 26b, 27b and 9).

We can represent 34a to a first approximation as 36.

(36)



One property of the kí-V-tcu construction is that it occurs only with transitive verbs, such as *q‖'ao* 'stab', *tchi* 'shoot', *g!ai* 'bite', *'n*ǂ*a''am* 'hit' and *q|aen* 'hit'. Not all transitive verbs can participate, however. For example, *tcu* 'drink', *‖obo* 'jump over', *!u* 'frighten' do not participate in the kí-V-tcu construction. In addition, the verb *'n*ǂ*a''am* 'hit' can be used to mean 'hit (something) physically' or 'play (an instrument)'. Only in the former sense is kí-V-tcu possible. The generalization seems to be that kí-V-tcu can be used when the action of the verb involves some sort of aggressive contact.

Just as with the kí-V-q‖o construction, plural deletion is not possible with the kí-V-tcu construction.

(37) ci i kí- q|aen *(-tcu) ci
3PL PAST kí[pl] hit REP 3PL
'They hit them.'

This sentence shows that the plural suffix *-tcu* can never be dropped, even if both the subject and the object are plural. Ex. 37 should be compared to the ex. 12, which shows that it is possible to delete the plural morpheme on the head noun if the possessor is plural. As in the case of the kí-V-q‖o this can explained by assuming that a plural morpheme on a noun and a plural morpheme on a verb do not count as identical, so that it is not possible to delete the plural suffix *-q‖o* on the verb under identity with the plural suffix on the subject or object.

One difference between kí-V-tcu and kí-V-q‖o is that kí-V-tcu does not entail that the events occur at different locations; example 38 shows this clearly.

(38) Jefo kí- q‖'ao-tcu -'a |'on ki ci m⊙un
Jeff kí[pl] stab-REP PERF tree PREP place one
'Jeff stabbed the tree repeatedly in one place.'

As shown above (see 31) it is generally not possible to add the adverbial expression 'in one place' to the kí-V-q‖o construction. In other words, kí-V-tcu means pure repetition, where kí-V-q‖o means sequential repetition at different places.

In the examples in 34 and 35, one person is performing several repetitions on one thing. In fact, the meaning of kí-V-tcu is more general, extending to other types of repetition. Consider 39.

(39) ma i kí- q|aen-tcu tcon!a'e
1SG PAST kí[pl] hit-REP people
'I hit the people.'

This sentence can be said if there are three people and I hit each person once. It can also be said if I hit the first person once, the second person once, and the third person many times. What is crucial is that there are a number of hittings. The reading where I take a long stick and hit all three people at the same time is excluded by 39. Rather, in this latter situation, I must say 40.

(40) ma i q|aen tsi
1SG PAST hit 3PL
'I hit them.'

If, however, I now hit three people with the long stick simultaneously three times in a row, then 39 becomes possible again. Similar contrasts obtain for other verbs that allow the kí-V-tcu construction; consider 41 for example.

(41) ma i kí- tchi-tcu tsi
1SG PAST kí[pl] shoot-REP 3PL
'I shot them (one by one).'

This sentence can be said if I shoot each person with a different bullet. But if I shoot one bullet and it goes through each person, then 41 is no longer possible.

In 39 and 41 the subject is singular and the direct object is plural. Examples can also be given where the direct object is singular, and the subject is plural, as in 42.

(42) tsi i kí- q|aen-tcu Jefo
3PL PAST kí[pl] hit-REP Jeff
'They hit Jeff.'

This can be said if there are three people and each hits Jeff once. The use of kí-V-tcu in this context may be somewhat less natural than in sentences where a singular subject acts repeatedly. The interpretation that seems excluded in 42 is where all three people hold a stick together and hit Jeff.

A natural question to ask is what form of the verb is used when three people hit

somebody at the same time (but not with the same stick). At first my informants said that the correct form is the singular *q|aen* 'hit', but later they changed their minds to say either the singular or the plural *kí-q|aen-tcu* 'hit-REP' would be acceptable. So it seems that temporal distinctness of events may not be a necessary condition for the use of kí-V-tcu, but the data are too murky to allow a definite conclusion.

Finally, consider 43, where both the subject and the object are plural at the same time.

(43) tsi i kí- q|aen-tcu tsi
3PL PAST kí[pl] hit-REP 3PL
'They hit them.'

Suppose that there are two groups of people A, B, C, and X, Y, Z. Sentence 43 can be used if A hits X once, then B hits Y once, and then C hits Z once. It can also be used if A hits X, then Y, then Z, and B hits X, then Y, then Z, and C hits X, then Y, then Z.

In general, what seems necessary for the use of kí-V-tcu is that a number of different events (described by V) occur. In this sense the kí-V-tcu plural is very similar to the kí-N-qa plural of inalienable nouns (where a number of different objects described by N must be present). I suggest the following semantics for the construction:

(44) let X be a set of events and V be a transitive verb of aggressive contact, then kí-V-tcu(X) iff
a. Card(X) $>$ 1, and
b. for all e in X, V(e)

I should point out here that the meaning of the kí-V-tcu is similar to the meaning of the 'distributive' reduplication that Lasersohn (1995) analyzes in Klamath, a Native American language. Similarly, Mithun (1988) reports that the function of *-va* in Karok (a language of Northern California) is 'to multiply actions' (distributed over multiple agents, patients, time or space).

5. PLURALIZATION ACROSS CATEGORIES. I have argued that the plurals of inalienable nouns (including postpositions) and the plurals of verbs (pluractional verbs) share the property that they are both formed using kí[pl], which agrees with a plural feature (either a plural noun or a plural verb). This analysis accounts for the fact that kí[pl] occurs only in the presence of a plural noun or a pluractional verb. In this section, I summarize and comment on the differences between the plurals of nouns and the plurals of verbs.

A number of differences have already been discussed. First, the plural morphemes for nouns (*-qa, -|a'a*) are different from the plural morphemes for verbs (*-q‖o, -tcu*). There is in fact one morpheme found with both nouns and verbs (*-n|e*), but for reasons of space I have not discussed it here (on the latter, see Gruber 1975a:42). I attribute the difference of plural suffixes between nouns and verbs to morphological subcategorization. The plural suffix *-qa* is subcategorized for a noun, whereas the plural suffix *-tcu* is subcategorized for a verb. In other words, the category of plurality generalizes across categories in ±Hoan, but specific plural morphemes do not. In contrast, the kí[pl] morpheme does generalize across categories in ±Hoan; it occurs with nouns and verbs, in each case agreeing with a plural morpheme. Thus ±Hoan exhibits a mix of cross-categorial generalizations and cross-categorial distinctions.

Other languages also have cross-categorial morphology. Mithun (1988:218, 224) discusses cases where the distributive of a verb and the distributive of a noun are formed by phonologically similar number markers (either reduplication or affixation).

A somewhat different, more extreme case is that of Straits Salish. Jelinek (1995:535) claims that 'Straits Salish lacks a contrast between nouns and verbs as lexical categories'. Obviously, this claim cannot be made for ǂHoan, since nouns and verbs are differentiated precisely on the basis of the types of plural suffixes that they take (*-qa* and *-ʃa'a* for nouns, *-tcu* and *-q‖o* for verbs).

The fact that the agreement morpheme kí[pl] does generalize across nouns and verbs is reminiscent of agreement in Hungarian. Szabolcsi (1984, 1994) shows that possessors trigger person-number agreement on the noun, which is 'almost identical to verbal inflection'. The difference between Hungarian and ǂHoan is that in Hungarian the inflection agrees with the possessor (for nouns) and the subject (for clauses), whereas in ǂHoan the agreement morpheme kí[pl] agrees with a plural head noun (for nouns) and a plural action verb (for clauses).

A second difference (already discussed) between the plurals of nouns and the plurals of verbs in ǂHoan is that plurality of inalienable nouns gives rise to plural deletion (the plural morpheme is deleted in certain circumstances), whereas the plurals of verbs never have this property.

A third difference is that the plurals of verbs often have a distributive meaning. For example, the kí-V-q‖o construction is used when there is a sequence of events, and those events occur in different locations (or at least, not all of the events occur in the same location). This distributive (distribution in space) meaning does not seem to be emphasized in the nominal domain in ǂHoan.

I attribute this lack of parallel between the nominal and verbal domain to a lexical gap in ǂHoan. Basically, ǂHoan lacks distributive forms for nouns. Ojeda (1998) analyzes singular, plural and distributive forms of nouns and the unitive, repetitive and distributed forms of verbs.[12] He postulates that 'Every distributed form denotes the set of sums of nonequivalent atoms in the denotation of its root' (1998:258). Papago uses a number of different equivalence relations to classify the atoms. For cattle, two cows are equivalent when they belong to the same herd (and nonequivalent when they belong to different herds). Two events are equivalent when they take place in the same location (and nonequivalent when they take place at different locations). Similarly, Mithun writes, reduplicated nouns in Nass Tsimshian, 'like reduplicated verbs, . . . function as distributives, emphasizing temporal, locative, or conceptual distribution' (1988:220).

Given this background, we can say that kí-V-q‖o is a distributed form for verbs (distribution in space and time), but that there is no distributed form for nouns. Mithun gives other examples of languages with verbal distributives (1988:224, 228), where the nominal distributive is shifting toward a purely plural meaning, so the lack of distributive nouns in ǂHoan is not surprising from a crosslinguistic point of view.

6. VERBAL SUPPLETION. ǂHoan has a small list of verbs that have suppletive plural forms. This kind of verbal suppletion is common in southern and northern Khoisan languages (but does not exist in central Khoisan languages), for example Ju|'hoan (Dickens 1992:63, 1994:19, 366) and !Xóõ (Traill 1994:27, Dickens & Traill 1977).

When the verb is intransitive, the suppletive form is used with a plural subject. When the verb is transitive, the suppletive form is used with a plural object. This 'ergative' pattern of suppletive verbs is also common crosslinguistically (see Durie 1986:357, Mithun 1988:214). For reasons of space, I will not give an analysis of this ergative

[12] Ojeda (1998) characterizes the unitive forms as nonplural, the repetitive forms as nondistributive plural, and the distributive forms as distributive plural. The category of pluractional verb includes both the repetitive and distributive verb forms of Papago.

SINGULAR	PLURAL	SINGULAR	PLURAL
q!'au	q‖he 'fall'	tca	ki-tca 'come'
cui	gun,qole 'drop'	!'uco	!a''am 'enter'
n|a	ki-‖a 'sit'	kyu	ga 'rise'
!ui	g‖an 'stand'	cin	cin-'n|a 'die'
ǂi'i	q!hau 'recline'	g‖a''a	g‖a''a-ci 'grow'
‖'i	g!a 'hang'	|'i	ki-|'i 'cry'
ki-'n!o	ki-ng!aen 'run'	ng|ai	ki-ng|ai 'laugh'
kya''o	ki-kya''o 'go'	ki-ǂ'o	ki-ǂo''o 'go from'

TABLE 1. Intransitive verbs.

pattern, but I will investigate the interaction of suppletive plurals with the kí[pl] found with pluractional verbs discussed above. Some of the intransitive verbs with suppletive plural forms are listed in Table 1 (from Gruber 1975a:5).

Note that some of these verbs ('sit', 'run', 'go', 'come', 'cry', 'laugh', 'go from') involve the use of a suppletive plural that starts with *kí*. I cannot analyze this as the productive kí[pl] seen above, since kí[pl] must attach to a plural verb (kí-V-q‖o or kí-V-tcu). I return to this point below.

The use of these forms is illustrated in 45 (examples from Gruber 1975a:7).

(45) a. ‖a'a-si cui -'a ki \|'on tc'one
thing-DIM drop.SG PERF PREP tree on
'The thing has dropped from the tree.'

b. ‖a'a-\|a'a gun -'a ki \|'on tc'one
thing-PL drop.PL PERF PREP tree on
'The things have dropped from the tree.'

c. *‖a'a-\|a'a cui -'a ki \|'on tc'one
thing-DIM.PL drop.SG PERF PREP tree on

d. *‖a'a-si gun -'a ki \|'on tc'one
thing-DIM drop.PL PERF PREP tree on

Durie (1986) notes that verbal number suppletion is widespread among the world's languages and gives convincing arguments that the suppletive plural is not some form of number agreement between a verb and one of its arguments (see also Gruber 1975a, Mithun 1988, and Hale et al. 1991 for similar conclusions). Ex. 4 shows that the suppletive plural is not agreement.

(46) a. ma 'a- tsi ǂ'amkoe ci 'a- kí-'n!o
1SG PROG see person INF PROG run.SG
'I see a person running.'

b. ma 'a- tsi tcon-!ka'e ci 'a- kí-ng!aen
1SG PROG see people INF PROG run.PL
'I see people running.'

c. ma 'a- tsi ǂ'amkoe !'aen-qa ci 'a- kí-'n!o
1SG PROG see person leg.PL INF PROG run.SG
'I see a person's legs running.'

This example shows the use of the singular and plural verb forms with the verb 'run'. When one person is running, *kí-'n!o* must be used; when two people are running *kí-ng!aen* is used. Now, if what is seen is a pair of legs (perhaps a flashlight shines on a pair of running legs in the dark), then the singular form of the verb must be used (46c). The most obvious explanation for this fact is that *kí-ng!aen* 'run.PL' can only

be used when two or more individuals are running. This suggests that verb suppletion is not agreement.

Specifically, I suggest that the suppletive plurals have the following meaning:

(47) let X be a set of events,
V[suppletive](X) iff
a. Card(X) $>$ 1, and
b. For all e in X, V(e), and
c. For all e_1, e_2 in X, Obj(e_1) and Obj(e_2) do not overlap

In this definition, Obj is a function from an event to a set of individuals; it is meant to be the theta role of the subject of intransitive verbs and the object of transitive verbs. The last clause is meant to prohibit a situation where all the events that V[suppletive] is true of have the same individual as theme or patient (or whatever theta role is assigned to the argument that triggers suppletion). This last clause makes verb suppletion different from the kí-V-tcu and kí-V-q‖o construction, which can be used even if both arguments are singular. It may be possible to weaken the last clause so that Obj(e_1) and Obj(e_2) are simply different (rather than nonoverlapping). At the present time I have no data that bear on this distinction.

6.1. LACK OF kí[pl] WITH VERBAL SUPPLETION. A remarkable fact about suppletive plurals is that they do not license the use of kí[pl].

(48) tsi (*ki-) gun -a (ki ǀ'on-qa kí- tc'one)
3PL kí[pl] drop PERF PREP tree-PL kí[pl] body
'They dropped from the trees.'[13]

(49) tsi (*kí-) !ka''m -'a ki !oa-qa kí- na
3PL kí[pl] enter.PL PERF PREP house-PL kí[pl] in
'They entered into the houses.'

Suppose that suppletive plurals involve no plural morpheme at all, just a suppletive form of the verb. This suppletive verb would then be a predicate of sets of events by definition. This definition of suppletive plurals is precisely what is provided by 47. Since kí[pl] requires the presence of an independent plural morpheme (*-qa* in the nominal domain,[14] *-q‖o* or *-tcu* in the verbal domain), it follows that kí[pl] would be impossible with a suppletive plural.

6.2. LACK OF VERB SUPPLETION WITH AFFIXAL PLURALS. I turn next to the interaction of suppletive plurals and affixal plurals. Consider 50 and 51:

(50) ya 'a- kí- !uco-q‖o ki !oa-qa kí- na
3SG PROG kí[pl] enter.SG-around PREP house-PL kí[pl] in
'He is running around into the houses.'

(51) *ya 'a- kí- !a''m-q‖o ki !oa-qa kí- na
3SG PROG kí[pl] enter.PL-around PREP house-PL kí[pl] in

This example illustrates that in the kí-V-q‖o construction, it is not in general possible to have the suppletive plural. This follows from the description of the suppletive plural in 47. In that description, each event needs to have a different participant, which does not hold for 51.

Note that if the subject is plural, then the suppletive plural becomes possible.

[13] Sentence 49 was judged acceptable in Gruber (1975a:41), although it was consistently judged as unacceptable by my informants.

[14] Recall that *-qa* may be deleted under certain conditions (§3).

(52) tsi kí- !a''m-q‖o -'a ki !oa-qa kí- na
3PL kí[pl] enter.PL-around PERF PREF house-PL kí[pl] in
'They entered one house, left it, entered another house, left it, etc.'

In 52, the subject is plural, and so it is now possible to use the suppletive plural.

7. CONCLUSION. My most basic conclusion is that nouns and verbs in ǂHoan are partially parallel in their ability to be pluralized. This has the consequence that plural morphology cannot be taken as a universal diagnostic of the category noun (see Frajzyngier 1985 and Newman 1990:86). Universal grammar must be specified as allowing nouns and verbs (and perhaps other major lexical categories) to be pluralized. Individual languages may disallow plural verbs. This result adds a further dimension to the parallel often postulated between noun phrases and clauses (Abney 1987, Bernstein 2000, Szabolcsi 1984, 1994).

Pluractional verbs provide direct support for the event argument of verbs (Lasersohn 1995; see also Ojeda 1998). If a verb did not have an event argument, it would be difficult to give a parallel semantic treatment to plural nouns and pluractional verbs.

This study suggests certain lines of research in comparative Khoisan linguistics. In particular, the following questions arise: Does the noun class system of ǂHoan found with inalienable nouns correspond to any of the noun class systems of other Khoisan languages? Does inalienable possession interact with plurality in other Khoisan languages? Can postpositions be pluralized in other Khoisan languages? How do the meanings of kí-V-q‖o and kí-V-tcu get expressed in other Khoisan languages? Do other Khoisan languages have cross-categorial morphology, such as kí[pl]? These questions take on a particular urgency, given the endangered status of the Khoisan languages and the unique character of the syntactic structures involved.

APPENDIX: A NOTE ON TRANSCRIPTION

In this article I base the orthography on Dickens 1994, with some deviations. One of the goals of this orthography is to reduce the number of diacritics. Here are some of the symbols I use:

NONCLICK CONSONANTS	
tc	[tʃ]
c	[ʃ]
VOWELS	
V'V	glottalized vowel
V''V	pharyngealized vowel
Vn	nasalized vowel
CLICKS	
|	dental click
⊙	bilabial click
‖	lateralized click
'n|	preglottalized nasal click
!	alveolar click
ǂ	palatal click
|'	dental click with a glottal release

REFERENCES

ABNEY, STEVEN. 1987. The English noun phrase in its sentential aspect. Cambridge, MA: MIT dissertation.

ABOH, ENOCH. 1999. From the syntax of Gungbe to the grammar of Gbe. Geneva: University of Geneva dissertation.

BELL, ARTHUR, and CHRIS COLLINS. 2001. ǂHoan and the typology of click accompaniments in Khoisan. Cornell Working Papers in Linguistics 18, ed. by Arthur Bell and Paul Washburn, 126-53.

BERNSTEIN, JUDY. 2000. The DP hypothesis: Identifying clausal properties in the nominal domain. The handbook of syntactic theory, ed. by Mark Baltin and Chris Collins, 536–61. Oxford: Blackwell.
BOWERS, JOHN. 1993. The syntax of predication. Linguistic Inquiry 24.591–656.
BROOKS, BRYAN. 1992. Pluractional verbs in African languages. Afrikanistische Arbeitspapiere 28.157–68.
CARSTENS, VICKI. 1991. The morphology and syntax of determiner phrases in Kiswahili. Los Angeles, CA: UCLA dissertation.
CHOMSKY, NOAM. 1970. Remarks on nominalization. Readings in English transformational grammar, ed. by Roderick A. Jacobs and Peter S. Rosenbaum, 184–221. Waltham, MA: Ginn.
CHOMSKY, NOAM. 1986. Barriers. Cambridge, MA: MIT Press.
CHOMSKY, NOAM. 2000. Minimalist inquiries. Step by step, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.
COLLINS, CHRIS. 2001. VP internal structure in Ju|'hoan and ǂHoan. Cornell Working Papers in Linguistics 18, ed. by Arthur Bell and Paul Washburn, 1-27.
DAVIDSON, DONALD. 1980. The logical form of action sentences. Essays on actions and events, 105–122. Oxford: Clarendon Press.
DICKENS, PATRICK. 1992. Ju|'hoan grammar. Namibia: Nyae Nyae Development Foundation of Namibia, MS.
DICKENS, PATRICK. 1994. English-Ju|'hoan, Ju|'hoan-English dictionary. Köln: Rüdiger Köppe Verlag.
DICKENS, PATRICK, and ANTHONY TRAILL. 1977. Collective and distributive in !Xóo. Khoisan linguistic studies 3 (A.S.I. Communcation 6), ed. by Anthony Traill, 132–44. University of the Witwatersrand, Johannesburg: African Studies Institute.
DURIE, MARK. 1986. The grammaticalization of number as a verbal category. Berkeley Linguistics Society 12.255–370.
FRAJZYNGIER, ZYGMUNT. 1985. Ergativity, number and agreement. Berkeley Linguistics Society 11.96–106.
GRUBER, JEFFREY S. 1973. Kinship terms. Linguistic Inquiry 4.427–49.
GRUBER, JEFFREY S. 1975a. Plural predicates in ǂHõã. Bushman and Hottentot linguistic studies (A.S.I. Communication 2), ed. by Anthony Traill, 1–50. University of the Witwatersrand, Johannesburg: African Studies Institute.
GRUBER, JEFFREY S. 1975b. Bushman languages of the Kalahari: ǂHõã—vocabulary-stems, ǂHõã—vocabulary—recorded utterances. Technical project report to the National Endowment for the Humanities, Washington, D.C.
GRUBER, JEFFREY S. 1975c. Collected field notes.
HALE, KENNETH; LAVERNE MASAYESVA JEANNE; and PAULA PRANKA. 1991. On suppletion, selection, and agreement. Essays in honor of S. Y. Kuroda, ed. by. Carol Georgopoulos and Roberta Ishihara, 255–70. Dordrecht: Kluwer.
HALLE, MORRIS, and ALEC MARANTZ. 1993. Distributed morphology and the pieces of inflection. The view from building 20, ed. by Kenneth Hale and Samuel J. Keyser, 111–176. Cambridge, MA: MIT Press.
JELINEK, ELOISE. 1995. Quantification in Straits Salish. Quantification in natural language, ed. by Emmon Bach, Eloise Jelinek, Angelika Kratzer, and Barbara H. Partee, 487–540. Dordrecht: Kluwer Academic Publishers.
LANDMAN, FRED. 1996. Plurality. The handbook of contemporary semantic theory, ed. by Shalom Lappin, 425–57. Oxford: Blackwell.
LASERSOHN, PETER. 1995. Plurality, conjunction and events. Dordrecht: Kluwer.
LINK, GODEHARD. 1987. Generalized quantifiers and plurals. Generalized quantifiers, ed. by Peter Gardenfors, 151–80. Dordrecht: Kluwer.
MITHUN, MARIANNE. 1988. The evolution of number marking. Theoretical morphology, ed. by Michael Hammond and Michael Noonan, 211–34. New York: Academic Press.
NEWMAN, PAUL. 1990. Nominal and verbal plurality in Chadic. Dordrecht: Foris.
OJEDA, ALMERINDO E. 1998. The semantics of collectives and distributives in Papago. Natural Language Semantics 6.245–70.
SNYMAN, J. W. 1970. An introduction to the !Xu (!Kung) language. Communication no. 34 of the University of Cape Town School of African Studies, Cape Town.

SZABOLCSI, ANNA. 1984. The possessor that ran away from home. Linguistic Review 3.89–102.
SZABOLCSI, ANNA. 1994. The noun phrase. Syntax and semantics, vol. 27: The syntactic structure of Hungarian, ed. by F. Kiefer and K. É Kiss, 179–274.
TRAILL, ANTHONY. 1973a. N4 or S7: Another Bushman language. African Studies 32.25–32.
TRAILL, ANTHONY. 1973b. Westphal on 'N4 or S7?': A reply. African Studies 33.249–55.
TRAILL, ANTHONY. 1994. A !Xóõ dictionary. Köln: Rüdiger Köppe Verlag.
VERGNAUD, JEAN-ROGER, and MARIA LUISA ZUBIZARRETA. 1992. The definite determiner and the inalienable constructions in French and English. Linguistic Inquiry 23.595–652.

Dept. of Linguistics
216 Morrill Hall
Cornell University
Ithaca, NY 14853
[cc42@cornell.edu]

[Received 28 May 1998;
revision received 24 January 2000;
accepted 25 February 2000]