

SAMOAN PRONOMINALIZATION

I. The Case Grammar Model for Samoan

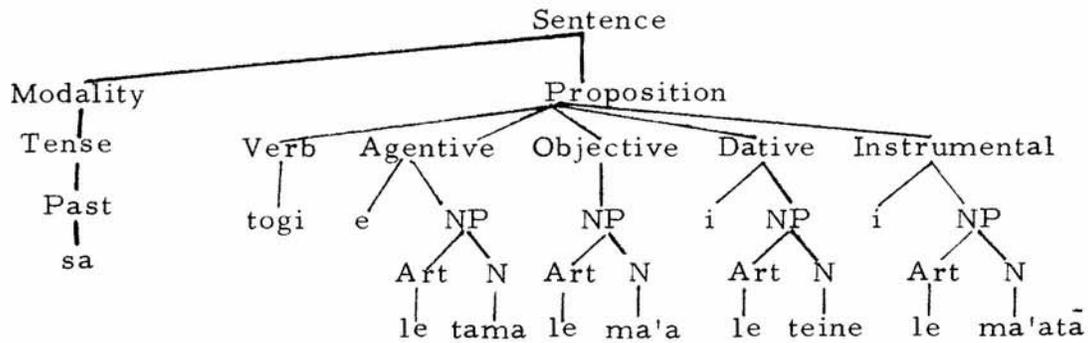
Samoan grammar may profitably be patterned after the "case grammar" model proposed in Fillmore (1968). In many ways the overt sentence structure of Samoan and other Polynesian languages is much more like the basic structure proposed by Fillmore than that of English, with which Fillmore was primarily concerned. While the model is not without its limitations (for example, the status of predicate nominals is unclear)¹, they are not relevant to the present discussion.

In a case grammar, a sentence has two immediate constituents: Modality and Proposition. The Modality constituent may contain markers for tense, aspect, negation, etc. The Proposition consists of a Verb and one or more case categories², to be realized as noun phrases (or possibly as embedded sentences). The case categories are chosen from a fairly small universal set, which includes (in Fillmore's terms) Agentive, Objective, Dative, Instrumental, Locative and a few other categories. No case category may appear more than once in a simplex sentence.

To illustrate how the model applies to Samoan, we will analyze the structure of a typical Samoan sentence in case grammar terms.

- 1) Sa togi e le tama le ma'a i le teine i le ma'atā.³
'The boy threw the rock to the girl with the sling.'

The sentence is analyzed as follows: sa (pronounced sā) is a past tense marker, the only overt representative of the Modality constituent. togi is the verb 'throw'. e is the case marker for the Agentive case. le is an article, tama 'boy'; jointly they form the noun phrase marked by the Agentive e. le ma'a 'the rock' is a noun phrase in the Objective case, whose marker is o, generally deleted except before a pronoun. le teine 'the girl' is marked with i as belonging to the Dative case, and the homonymous i marks le ma'atā 'the sling' as Instrumental case.⁴ As a tree:



The order of categories shown here is the basic, or neutral, order. For purposes of style or emphasis the categories may appear in any desired order, apparently without constraint, so long as they remain to the right of the verb.

2. Samoaan Pronouns

Any of the noun phrases in 1) may be replaced by a pronoun, the form of the pronoun depending on the case. A subsequent rule deletes the case marker (except the Dative *i*) and moves the pronoun (and for the Dative, the *i* as well) forward in the sentence: to the left of the verb for the Agentive pronoun, the right of the verb in all other cases. This rule is apparently optional for Agentive, Objective and Dative, and obligatory in all other cases (e.g. Instrumental). Thus the following forms analogous to 1) are possible:

- 2) Sa togi e ia le ma'a i le teine i le ma'atā.⁻⁵
'He threw the rock to the girl with the sling.'
- 3) Sa ia togi le ma'a i le teine i le ma'atā.
Same as 2)
- 4) Sa togi e le tama o ia i le teine i le ma'atā.
'The boy threw it to the girl with the sling.'
- 5) Sa togi ia e le tama i le teine i le ma'atā.
Same as 4)
- 6) Sa togi e le tama le ma'a i ai i le ma'atā.
'The boy threw the rock to her with the sling.'

- 7) Sa togi i ai e le tama le ma'a i le ma'atā.
Same as 6)
- 8) Sa togi ai e le tama le ma'a i le teine.
'The boy threw the rock to the girl with it.'

Although most transitive verbs in Samoan take subjects in the Agentive case and direct objects in the Objective case, like togi, a certain subclass take subjects in the Objective case and direct objects in the Dative case, except when they appear in the so-called "Passive" (a morphological alternate whose syntactic and semantic properties are not entirely clear), in which case they behave like other transitive verbs. This class includes va'ai 'see', mana'o 'want', manatu 'remember', alofa 'love', and a number of others. It is not known whether there is any way to predict this property, that is, whether these verbs belong to some independently motivated natural semantic or syntactic class. Thus there are the sentences

- 9) Sa va'ai le tama i le ufi.
'The boy saw the yam.'
- 10) Sa va'ai i ai le tama.
'The boy saw it.'
- 11) Sa va'aia e le tama le ufi.
Same as 9) -- "Passive".

Verbs of this class will be used in some subsequent examples. Their "Passive" forms will not be considered further.

As in other languages, Samoan pronouns may appear lexically, that is, without an antecedent in the same sentence, or as replacement for a noun phrase identical to some other noun phrase within the sentence. It is in the latter case that questions of pronoun-antecedent relationships arise. We shall examine a number of such situations in Samoan.

3. Samoaan Pronominalization - The Data

3.1 Complex Structures Pronominalization situations frequently arise in sentences containing relative or subordinate clauses. If the main clause and the embedded clause contain coreferential noun phrases, one will appear as a pronoun. Thus the following forms are possible (coreferential NP's are underscored):

- 12) Sa 'ai e le tama le ufi sa ia sogi.
'The boy ate the yam that he cut.'
- 13) Sa iloa e le tama le teine sa alofa iā te ia.⁶
'The boy knew the girl that loved him.'
- 14) Sa 'ai e le tama sa va'ai i ai le ufi.
'The boy who saw it ate the yam.'

Sentence 14), as well as its English translation, is an instance of right-to-left or "backwards" pronominalization. It is possible in Samoan, as in English, because the pronominalized NP appears in the embedded clause. When the leftmost NP is in the main clause, right-to-left pronominalization is impossible:

- 15) *Sa va'ai i ai le teine sa alofa i le tama.
'*The girl saw him who loved the boy.'

Samoaan contains an additional restriction on pronominalization in complex sentences, not found in English. In Samoaan it is impossible to have a pronoun and its antecedent in unconnected relative clauses. A relevant example from English is

- 16) The girl who loved John knew a boy who hated him.

Analogous structures in Samoaan would be

- 17) *Sa alofa i le tama sa tō le ufi le teine sa va'ai i ai.
'The boy who planted the yam was loved by the girl who saw it'⁸

- 18) *Sa 'ai le ufi sa tō e Ioane e le teine sa va'ai i ai.
'The yam which John planted was eaten by the girl who saw him.'⁸

17) is grammatical only if the pronoun ai is understood as referring to le tama; in 18) ai must refer to le ufi. The two sentences together indicate that this phenomenon does not depend on selectional restrictions on possible objects of the verb va'ai.

3.2 Coordinate Structures Pronoun-antecedent pairs can also appear in conjoined sentences, full and reduced.

- 19) Sa va'ai le tama i le ufi ma mana'o i ai.
'The boy saw the yam and wanted it.'

The pronominalization in 19) is left-to-right, as in the English. Samoan also provides the possibility, not available in English, of right-to-left pronominalization in coordinate structures:

- 20) Sa va'ai i ai le tama ma mana'o i le ufi.
'*The boy saw it and wanted the yam.'

3.3 Reflexives The data so far presented have dealt with complex and coordinate structures. Pronominalization can also occur in simplex sentences. If the subject and direct object noun phrases in a transitive sentence are coreferential, one of them will appear as a pronoun. This may be called reflexivization, although there are some important differences from the process of reflexivization in English and other more familiar languages, as we shall see.

A typical reflexive sentence in Samoan is

- 21) Sa sogi e Ioane ia lava.
'John cut himself.'

where ia lava corresponds to the reflexive pronoun of English, and refers to Ioane. In 21) ia lava is in the Objective case (with the case marker o deleted), and thus is functioning as the direct object of the

verb sogi. However, this is not required in Samoan; ia lava can also appear in the Agentive case, thus as the subject, and Ioane in the Objective case:

- 22) Sa sogi Ioane e ia lava.
* 'Himself cut John.'

What is required is that Ioane, in whichever case, precede ia lava:

- 23) *Sa sogi e ia lava Ioane.
24) *Sa sogi ia lava e Ioane.

The presence of the morpheme lava in 21) and 22), coupled with its absence in sentences like 4) and 5), might lead one to suspect that lava, like the English -self, is a distinguishing characteristic of reflexives. However, this is not the case. The presence of lava is neither a necessary nor a sufficient condition for a sentence to be reflexive.

- 25) 'O Ioane sa sogi o ia.
Ambiguous: 'It was John who cut him (it, her)', or: 'It was John who cut himself.'
26) 'O ia lava sa sogi e Ioane.
'It was him that John cut.'

Sentences 25) and 26) have undergone topicalization, to be discussed below. Sentence 25), without lava, can be interpreted as a reflexive; 26), with lava, is unambiguously nonreflexive. The interesting thing to note for our purposes is that when a pronominalized NP follows a full NP of a different case, it may be coreferential with it, but not if it precedes. Reflexive pronominalization can only be left-to-right in Samoan.

3.4 Emphatics Corresponding to some degree to the English "emphatic reflexives" are constructions containing a full noun phrase and a coreferential pronoun in the same case:

- 27) Sa va'ai le teine i ai i le ufi.⁹
'The girl saw the yam itself.'
- 28) Sa va'ai i ai le teine i le ufi.
Same as 27)
- 29) Sa sogi ai e Ioane le ufi i le naifi.
'John cut the yam with the knife itself.'
- 30) Sa ia sogi le ufi e Ioane.
'John himself cut the yam.'

Recall that under certain conditions pronouns are moved forward in the sentence. Sentences 28)-30) exhibit the influence of this rule.

The pronoun-antecedent relationships found in emphatic constructions are just the reverse of those in reflexives. As 27)-30) show, the pronoun appears to the left of its antecedent, either immediately, as in 27), or at some remove, as the result of pronoun movement. Moreover, it is necessary, not just possible, for the pronoun to precede its antecedent:

- 31) *Sa va'ai le teine i le ufi i ai.

3.5 Topicalization The last class of cases we shall examine involve the phenomenon of topicalization. Any noun phrase may appear at the beginning of the sentence, in which case it is given the case marker 'o, which for convenience we may refer to as the Topic marker. When this occurs, the pronoun appropriate to the underlying case of that noun phrase appears in the position dictated by the pronoun movement rule. Thus the following sentences with topicalized NP's all correspond to 1):

- 32) 'O le tama sa ia togi le ma'a i le teine i le ma'ata.⁻¹⁰
- 33) 'O le ma'a sa togi ia e le tama i le teine i le ma'ata.⁻¹⁰

- 34) 'O le teine sa togi i ai e le tama le ma'a i le ma'atā.
- 35) 'O le teine sa togi e le tama le ma'a i ai i le ma'atā.
- 36) 'O le ma'atā sa togi ai e le tama le ma'a i le teine.

In 32)-36), as in all cases of topicalization, the antecedent NP appears to the left of the corresponding pronoun.

4. Discussion

4.1 Primacy Relations Langacker (1966) defines two primacy relations in terms of which the constraints on pronominalization of definite NP's in English may be described. They are precedence and command. A noun phrase precedes another if it appears to the left of the other in the written form. A noun phrase is said to command all other noun phrases within its clause and within all clauses subordinate to its clause.

Given these two definitions, Langacker states the constraints on pronominalization as follows:

NP^a may be used to pronominalize NP^p [that is, NP^p may appear as a pronoun whose antecedent is NP^a ---PGC] unless (1) NP^p precedes NP^a; and (2) either (a) NPP commands NP^a, or (b) NP^a and NPP are elements of separate conjoined structures. In conjoined structures, where the "commands" relation can have no possible relevance, NP^a can pronominalize NP^p unless NP^p precedes NP^a. In all other structures, where both "commands" and "precedes" are operative, NP^a can pronominalize NP^p unless NP^p commands NP^a and NP^p precedes NP^a. We now see that there is only one major restriction on pronominalization, and it may be stated as follows: NP^a may be used to pronominalize NP^p unless

NP^P bears all relevant primacy relations to NP^a.
This one restriction works both for conjoined structures and for other structures (as well as sufficing for reflexivization).¹¹

It is not to the purpose to restate Langacker's arguments here. However, a few English examples may serve to make the constraints clearer.

- 37) Peter hates the woman who rejected him.
- 38) The woman who rejected Peter hates him.
- 39) The woman who rejected him hates Peter.
- 40) *He hates the woman who rejected Peter.
- 41) Mary saw John and kissed him.
- 42) *Mary saw him and kissed John.

In 37), Peter both precedes and commands him. In 38) Peter precedes but does not command him, while in 39) Peter commands but does not precede him. These are all grammatical sentences, in accord with the constraint. Only 40), in which he both precedes and commands Peter, is ungrammatical. 41) and 42) are conjoined structures, where, according to Langacker, the notion of "command" is not relevant. Thus the primacy relation "precedes" determines grammaticality, allowing 41) and excluding 42).

Although Langacker draws his examples from English, he asserts that exactly the same constraints hold in French, and he is quite properly concerned with the universal aspects of the constraints, that is, their implications for linguistic theory. It is precisely because of the theoretical interest of pronominalization that a number of linguists have given it careful attention. Ross (1967a) offered an ingenious argument that English pronominalization was best described

with an obligatory cyclic transformational rule. Postal (1968) studied pronoun-antecedent relationships intensively as part of a general study of coreferentiality. Lakoff (1968) extended the constraints to cover pronominalization of indefinite NP's, and suggested that the constraints on pronominalization are actually "output conditions", that is, they serve as templates determining which subset of the total set of transformationally derived surface structures are in fact acceptable. This list is not exhaustive, but it is indicative. The discussion of pronominalization since the appearance of Langacker's paper, although exposing some problems in their correct formulation, has not upset his fundamental conclusions on the importance of primacy relations in pronominalization--the constraints are the same, whether they are constraints on rules or on possible structural configurations.

The Samoan data given violate Langacker's constraints in a number of ways, to be shown immediately. This does not mean, however, that we should abandon the search for universals of pronominalization; rather, we should seek to modify the constraints in such a way as to make the strongest possible statement which is accurate for Samoan as well as English and French. The balance of this paper will be devoted to that attempt.

4.2 Status of the Primacy Relations for Samoan There are at least three ways in which the constraints on pronominalization in Samoan differ from those in English. Two of these have already been pointed out in the presentation of the Samoan data, but will be reiterated here.

In structures containing embedded clauses, to which the relation of "command" is primarily relevant, the constraints in Samoan are more stringent than in English, in that all of the English constraints hold, plus the additional constraint that the pronoun and its antecedent may not be in unconnected embedded clauses. Violation of this constraint is responsible for the ungrammaticality of 17) and 18).

For Samoan coordinate structures, on the other hand, the constraints are looser than in English; right-to-left as well as left-to-right pronominalization is permitted. This is shown in example 20).

Within simplex sentences, left-to-right pronominalization is the rule in topicalized and reflexivized cases, consistent with English; but in the emphatics, right-to-left pronominalization is obligatory, which is directly contrary to the constraints proposed for English. The relevant examples are 21)-24) for reflexives, 27)-31) for emphatics, and 32)-36) for topicalizations.

5. Proposed Generalizations of the Pronominalization Constraints

5.1 Complex Structures The correct modification required for generalization of the constraints is least clear in the case of structures containing embedded clauses. A plausible first guess would be that in Samoan an antecedent must command a pronoun, while in English it must either command or precede the pronoun. This is incorrect, however, since it is possible in Samoan for the pronoun to command its antecedent, so long as it follows it:

- 43) 'O le teine o lē sa alofa iā Ioane sa va'ai i ai.¹²
'The girl who loved John saw him.'

Tentatively I will propose that Samoan differs from English in that coreferential pronouns and antecedents must lie within the same "chain of command" (see Langacker (1966)). Since the constraints are otherwise the same, this implies that this is the only language-particular choice which needs to be made with respect to pronominalization in complex structures. It is tempting to speculate that there is a tradeoff between the degrees of pronoun differentiation found in a language (English 'he', 'she', and 'it' all correspond to Samoan ia) and the severity of constraints on pronominalization. Presumably more severe constraints are required to reduce ambiguity when pronouns are so versatile. Such a tradeoff would be akin to the tradeoff which has frequently been noted between the degree of inflectional differentiation and the severity of word order constraints.

5.2 Coordinate structures The situation is quite different with respect to pronominalization in coordinate structures. Here

we must relax constraints in the appropriate way. This fact is one of many which indicate that coordinate structures must be handled in very different ways from other types, suggesting that Langacker's generalization of his constraints to cover all pronominalization in English was spurious. A more general cross-linguistic statement can be made by considering inter-conjunct pronominalization separately.

In a recent paper (Langacker 1969), Langacker has investigated a variety of phenomena which indicate the need in linguistic theory for a notion of "mirror-image rules". These are defined (roughly) as transformational rules whose structural indices can be satisfied and structural changes performed in two directions, one the exact reverse of the other. Inter-conjunct pronominalization in Samoan is a clear example of a mirror-image situation. A first approximation to the rule would be

44) X NP Y ma Z NP W
 * 1 2 3 4 5 6 7 \Rightarrow 1 2 3 4 5 PRO 7

where 2 = 6

The asterisk is Langacker's notation to mark the rule as mirror-image. In the case at hand, it means that the structural index can be satisfied in the order 7 6 5 4 3 2 1, with the structural change still being that the sixth segment (now the leftmost NP) becomes PRO.

Now a hypothesis may be proposed: inter-conjunct pronominalization is universally as shown in rule 44)¹³, with the exception that languages vary as to whether rule 44) is mirror-image. This hypothesis makes a very strong empirical claim, namely that there is no language in which inter-conjunct pronominalization proceeds only from right to left.

As mentioned above, Lakoff (1968) argued that pronominalization constraints are not constraints on rules, but rather on possible structural configurations derived by rules. McCawley (1968) went a step further, proposing that there is not really a rule of pronominalization at all, but rather that at the most abstract level, noun phrases in a sentence are represented by variables, the values of which are expressed "outside" the sentence. When

two or more variables have the same value, one or more of them will appear as a pronoun. The comment made earlier is applicable here, namely that the constraints are still required to determine which variables appear as pronouns and which as antecedents. However, some doubt is cast on the hypothesis just proposed; if there is no rule of pronominalization, how can languages vary as to whether pronominalization is mirror-image? The answer to this objection is that while Langacker was able to formulate the mirror image principle quite precisely in terms of transformational rules, the evidence he offered for its need was drawn from a wide range, including phonological and semantic as well as syntactic phenomena. If the generalizations captured by the mirror image principle are linguistically significant ones, then that principle bids fair to be a basic property of human languages. Whether generalizations at all levels can be expressed by rules of the same formal nature, as Langacker suggests, or not, as McCawley seems to suggest, the mirror image generalizations remain to be accounted for, including the generalization expressed in Rule 44).

It is worth noting in this regard that McCawley's principal argument against rules of pronominalization is based on the phenomenon generally known as the Bach-Peters paradox, which McCawley attributes to Kuno. The paradox is that if pronominalization consists in substituting a pronoun for a full noun phrase, then sentences like

45) The boy who wanted it got the prize he deserved.

must have infinitely deep deep structures, since each of the full NP's to be pronominalized contains the pronoun referring to the other one. McCawley's scheme avoids this problem by denying the assumption that pronominalization is substitution, i. e. an operation performed by a transformational rule. However, example 45) crucially involves structures embedded in the same main clause. I know of no way to achieve the same paradoxical results when pronominalization is across a coordinate conjunction;

46) *The boy who kissed her and the girl who slapped him were both admonished.

for example, is ungrammatical.¹⁴ Thus if inter-conjunct

pronominalization is a separate phenomenon from other sorts of pronominalization, as I suggested above, it is possible that it could be transformational and other pronominalization not.

5.3 Copying Rules There remain still to be considered the instances of pronominalization in simplex sentences--reflexives, emphatics, and topicalized sentences. Here the data appear the most contradictory. In topicalization and reflexivization, pronominalization is necessarily left-to-right, in emphatics necessarily right-to-left. It will be the purpose of this section to demonstrate that a deeper generalization underlies this seeming diversity.

In his doctoral thesis (Ross 1967b, pp. 426ff.) Ross establishes a distinction between chopping transformations and copying transformations. A chopping transformation reorders some term of its structural index and leaves in its place either nothing or some distinct term of the structural index. A copying transformation, as the name implies, copies some term of the structural index at some other point. We shall not be further concerned with chopping transformations here, but the notion of copying transformations is very important to our purposes. Observe that the effect of a copying rule is to create a structure with some identical parts; if these parts are noun phrases, one would expect pronominalization to occur, and in fact it does.

That topicalization in Samoan is a copying rule is fairly easy to see from the relationship between sentence 1) and sentences 32)-36). Any noun phrase of the basic structure may be copied at the left of the sentence and given the Topic marker 'o. The original noun phrase, to the right of the verb, is then pronominalized, and the pronoun moved or not, as the case may be.

It may be less obvious that emphatic formation is also a copying rule. To show this, it is necessary first to restate two facts about Samoan which were mentioned earlier. First, there is at most one representative of each case category present in the basic structure of a simplex Samoan sentence. Second, the only case marker not deleted in the course of pronoun movement is the Dative i. Example 28) is now presented again for convenience:

- 28) Sa va'ai i ai le teine i le ufi.
'The girl saw the yam itself.'

In 28) le ufi is in the Dative case, and the i preceding ai shows that it is also in the Dative case. But since only one noun phrase in the Dative case could have been present in the underlying form, one or the other in 28) must have been created by a copying rule.

It remains to show which one. Example 30), repeated here, offers the required evidence:

- 30) Sa ia sogi le ufi e Ioane.
'John himself cut the yam.'

In 30), Ioane and ia are in the Agentive case, le ufi in the Objective case. As stated earlier, the basic order of case categories in Samoan is Agentive, Objective, Dative, etc. This is the neutral order which emerges when no special emphasis or style is intended; and under circumstances in which ambiguity is possible, such as in double topicalization, it is the required order:

- 47) 'O le tama 'o le teine sa alofa i ai.
'The boy loved the girl.'

In 47), le tama is topicalized out of the Objective case, le teine out of the Dative case. Reversing the order of the two topicalized noun phrases is not possible; the sentence cannot be interpreted 'The girl loved the boy.'

Scrambling the order of the case categories to the right of the verb is in general permissible. However, their order in 30) is the only order which is really acceptable:

- 48) ?* Sa ia sogi e Ioane le ufi.

The informant indicates that while you might expect to see a form like 48) in books, it would never be said.

The requirement of inverted case category order in 30) can easily be explained if we assume that the rule for creating emphatics

copies the case category to be emphasized at the right of the sentence. The left-hand or original noun phrase is then pronominalized, and the pronoun moved according to the pronoun movement rule. This generalization covers the Dative instances as well, of course.

While topicalized sentences and emphatics owe their pronouns to copying rules, reflexives are like the cases discussed earlier in that the identical noun phrases they contain are present in the base structure. This is shown by the fact that the pronominalized NP in a Samoan reflexive is generally in a case required by the verb of the sentence. For example, the verb sogi 'cut' requires a noun phrase in the Objective case, and may have a noun phrase in the Agentive case as well. Examples 21) and 22) show the reflexive pronoun as the only representative of the Objective and Agentive cases, respectively. In addition, standard arguments for identical NP's in the underlying form of reflexives based on verb-object selectional restrictions and on semantic interpretation apply to Samoan.

This difference between reflexives and emphatics, coupled with the earlier observation that the copying rule responsible for emphatics copies to the right, is sufficient to explain their different behavior under pronominalization. When a sentence contains identical NP's in its underlying structure, then the normal pronominalization constraints apply (subject to the modifications already discussed). But when a sentence contains identical noun phrases as the result of a copying transformation, then the original NP is the one pronominalized, regardless of the pronominalization constraints. Put differently, the direction of copying determines the direction of pronominalization; a rule which copies to the left, like topicalization, entails pronominalization to the right (thus not in conflict with the constraints), but a rule which copies to the right, like the rule for emphatics, entails that pronominalization go right-to-left.

This principle, formulated to account for the Samoan data, finds strong corroboration in the fact that it explains an otherwise anomalous fact of English. In many dialects of English (generally

considered substandard) there is a phenomenon which Ross has termed dislocation.¹⁵ Two examples will illustrate:

49) The man on the corner, he's the one who robbed the bank.

50) I used to know him, the guy who married Alice.

Coreferential NP's are underscored, as before. As the examples show, dislocation can be either to the left or to the right. When it is to the left, then the pronoun must follow the antecedent:

51) *He, the man on the corner's the one who robbed the bank.

This is consistent with normal rules of English pronominalization. However, when dislocation is to the right, the pronoun must precede the antecedent:

52) *I used to know the guy who married Alice, him.

The situation illustrated by examples 50) and 52) is directly contrary to the normal constraints on English pronominalization.

Ross gives tentative formulations of the rules of Left Dislocation and Right Dislocation, which he offers as examples of Copying Rules. Ross' rules accomplish the appropriate pronominalization as part of their structural changes. However, this is unsatisfactory on two counts. First, pronominalization in sentences affected by dislocation must be assumed to be part of the general system of English pronominalization unless it is demonstrated otherwise. Accomplishing pronominalization within the operation of the dislocation transformations is contrary to this assumption. Secondly, the choice of the NP to be pronominalized in the two rules is determined entirely by the descriptive requirements; it is arbitrary within the theory.

The principle enunciated above, that in the case of identical NP's created by a copying transformation the original NP must be pronominalized, if it is incorporated within the theory, will serve to explain the data represented by examples 49)-52).¹⁶

Postal (1968) considered the same phenomena briefly, and actually stated the generalization reflected by the proposed principle (*op. cit.*, p.121) but apparently inadvertently, since he failed to capitalize on it, proceeding instead to the observation that pronominalization need not be incorporated into the rule of Left Dislocation if it were ordered before the pronominalization rule, but that this stratagem could not account for the cases of Right Dislocation.

A possible counterexample to the principle of original NP pronominalization is the process of "tag question" formation in English. Tag questions are forms like the following:

- 53) Max can answer most of the questions, can't he ?
- 54) Isabelle has eaten all the donuts, hasn't she ?
- 55) The children are playing in the pool, aren't they ?

A plausible assumption as to the derivation of these is that the "tag" part, after the comma, is formed by copying the appropriate parts of the preceding declarative and pronominalizing the copied NP. If this is indeed the correct analysis, then the NP which is pronominalized is the copy, not the original, contrary to the principle. The reason I do not regard tag questions as a decisive counterexample at this point is that to the best of my knowledge, there has been no attempt to go beyond the plausible first assumption in dealing with them, and on that assumption there are several other factors about them which are virtually unique in the theory. The restriction that the contracted negative n't must appear either in the declarative part or in the tag but not in both places, is one example; another is that they have two equally possible intonation patterns, rising and falling.¹⁷ Pending further investigation which demonstrates that the superficially plausible analysis of tag questions is indeed the correct analysis, at least as regards pronominalization of a copied NP, I am willing to maintain the principle.

6. Summary

In this paper, we have proposed three modifications to linguistic theory, based on a study of pronominalization in Samoan:

- (1) It is a possible language-particular constraint on pronominalization in complex structures that a pronoun and its antecedent must lie within the same "chain of command."
- (2) The rule of pronominalization in coordinate structures may in particular languages be mirror-image.
- (3) When a sentence contains identical noun phrases as the result of a copying transformation, then the original NP is the one pronominalized, regardless of the pronominalization constraints.

While Fillmore's case grammar model has been assumed here, partly to facilitate discussion and partly because of the author's feeling that the model should be of considerable interest to Polynesian scholars, it must be emphasized that the data and conclusions with respect to pronominalization are in no way dependent upon or artifacts of that model. The constraints discussed on pronoun-antecedent relationships must be accounted for within any linguistic theory.

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FOOTNOTES

1. This is recognized by Fillmore (op. cit., p. 84).
2. This is Fillmore's formulation (op. cit., p. 24). Actually it seems that impersonal constructions, such as statements about the weather, may best be regarded as sentences with no case categories, only verbs. This is particularly clear in Samoan.

Ua timu
Tense rain (verb)
'It's raining.'

These constructions will not be considered further in this paper.

3. All examples will be given in standard Samoan orthography. The symbols have their usual phonetic values with the exception of /g/, which represents [ŋ], and /'/, which represents [ʔ].
4. That Dative and Instrumental really are distinct cases, in spite of their homonymous case markers, will become immediately evident from their differing behavior under pronominalization.
5. For this and subsequent examples it should be noted that Samoan pronouns do not distinguish gender; ia and ai will be translated 'he', 'him', 'she', 'her' or 'it' as the occasion demands.
6. iā te ia is the form of the Dative case marker and Dative pronoun required in this construction, instead of the usual i ai. i ai in place of iā te ia in sentence 13) is understood to refer to le teine, giving an English translation 'The boy knew the girl that he loved.' The latter construction shows the same pronominalization constraints, of course. The reasons for this alternation remain a problem for further study.
7. The English translation of 15) is marginal to ungrammatical for some speakers of English for a reason irrelevant to the point at issue, namely, the extraposition of the relative clause on girl. This seems to be more generally acceptable in a sentence like

Everybody loves the king who knows him.

The English version of 15) has been deformed in this way to offer the closest possible approximation to a language with a different basic word order.

8. The English passive is used in translation simply to indicate the relevant antecedent-pronoun relationship. No claim is implied that 17) and 18) share any special properties of English passives.

9. This is probably not the best possible English translation of 27). The informant, only moderately skilled in the use of English, offered the translation 'The girl really saw the yam', and explained that the sentence containing the emphatic indicated that the yam was the focus of vision while without the emphatic it could mean that the yam was one of a number of objects in the field of vision. The English translation with the emphatic reflexive has been chosen more as a syntactic than a semantic analogue. Similar comments hold for examples 29) and 30).

10. The pronoun ia, in both the Agentive and Objective cases, may be and in fact usually is deleted in topicalized forms.

11. Langacker (1966), p. 22. Underscoring his.

12. Two aspects of this sentence require comment. iā is a morphological alternate of the Dative case marker i found before proper nouns and, followed by te, before personal pronouns. o lē is a marker which introduces relative clauses--it is not clear whether it would be accurate to call it a "relative pronoun". The rules governing its appearance are not known--it seems generally to be possible to include it, and under certain conditions obligatory. It is used here to indicate unambiguously which of the two tense-marked clauses is the embedded clause. Because of the possibility of relative clause extraposition, 43) without o lē could be translated 'The girl loved John who saw him.' On this reading, of course, the sentence would not serve as an example of a pronoun commanding its antecedent.

13. Obviously the Samoan morpheme ma is not intended as part of a universal rule. We may postulate that every language has a morpheme whose function it is to connect coordinate structures; then segment 4 of a universal version of rule 44) would be the abstract underlying

form of that morpheme, which would receive different language-particular realizations.

14. It is possible, given the possibility of right-to-left pronominalization in Samoan coordinate structure, that such an example could be constructed for Samoan.
15. Ross 1967b, pp. 422, 428. Ross credits the term to Maurice Gross.
16. I am indebted to John Grinder for first pointing this out to me.
17. This is true of tagged declaratives, but not of tagged imperatives:

Close the door, won't you ?

can only have rising intonation. This asymmetry seems a likely-looking point to begin reanalysis of tag formations.