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Resumptive Pronouns, Syntactic Binding, and
Levels of Representation in Belauan*

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1. Introduction

Consider the occurrence of the third-person pronoun in sentences like (a) through (c):

- (a) Let's go to that Mexican restaurant that I never can remember where it is.
- (b) This is the elevator that its doors are always flying open.
- (c) Who is that professor that you wonder if you should remind him to come to class?

These are examples of resumptive pronouns, whose appearance inside syntactic islands like relative clauses or embedded questions (see Ross 1967) "saves" a sentence from being an island violation. That is, they allow extraction of an NP from a position that is inaccessible to movement. Their use is well known to be irregular, or marginal, in English. According to the account in Chomsky (1982), they do not receive interpretation as bound variables until the level of Logical Form (LF), whereas gaps are bound at S-structure as a result of operation of the rule Move Alpha (Move A). This rule moves some phrasal category to a non-argument (A') position (usually COMP) and

coindexes the moved phrase with the empty category left in argument position, producing what is described as an operator-variable relation. Since resumptive pronouns are not produced by movement, they are not coindexed by Move A; it is a rule of interpretation at LF that relates them to an A' binder, and which legitimizes islands containing them. The necessity of these two kinds of binding operation is taken as one argument for the distinction between S-structure and LF.

Evidence seems to be accumulating, however (see Engdahl (1983b); Zaenen, Engdahl, and Maling (1981); McCloskey (1979); McCloskey (1983); Georgopoulos (1983a); Chao and Sells (1983)), that resumptive pronouns may in some languages be interpreted as bound variables at S-structure. That is, these authors claim that the binding of resumptive pronouns results from operations in the syntax and not from an interpretive rule at LF. This paper presents data from Belauan, a western Austronesian language,[1] which favors the view that resumptive pronouns may be variables bound in the syntax, and shows that this interpretation is bolstered by their cooccurrence with gaps in coordinate structures, and their ability to license parasitic gaps.

Chomsky (1982) makes two central claims about parasitic gaps: one, that they are introduced in D-structure as pronominals, and become variables at S-structure through coindexing with an A' binder in COMP, and two, that they may not be licensed by resumptive pronouns, since the latter do not receive interpretation as bound variables until LF. Kayne (1983) concludes that resumptive pronouns are not subject to the Connectedness Condition, as they are insensitive to the ECP and do not license parasitic gaps. I will attempt to show that the Connectedness Condition may indeed be extended in a natural way to apply to structures with resumptive pronouns. Finally, I will discuss certain points of view on the fact that some languages appear to allow overt pronouns as variables at S-structure, while others do not.

2. The Extraction Data

Some grounding in Belauan grammar will be helpful in understanding the data that follow.[2] I will focus here on leftward extraction: constituent questions, relativization, and topicalization, all of which are very productive and regular processes in Belauan syntax.

Belauan is a VOS language allowing extraction of a full range of NPs, including subjects, direct objects, oblique objects, and possessors.[3] Extraction of most NPs leaves an empty category at the extraction site, with one exception -- extraction of prepositional objects leaves a resumptive pronoun. This language has only one preposition, er,[4] which has a somewhat complicated distribution. It marks a variety of oblique object positions, some possessors, and the direct objects of imperfective transitive verbs when those objects are [+human] or [+singular, +definite]. Direct objects of perfective verbs have no special marker. This aspect distinction

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will become important below, as it gives rise to structures containing both a gap and a resumptive pronoun bound by the same operator. Examples of extraction sentences are given below.[5]

(1) WH-question on subject:

- a. [ngte'a_i [a sensei er kau ____i]]
 who teacher P 2s
 'Who is your teacher?'
- b. [ngte'a_i [ledilu a Droteo [el kmo [ngmilsa [el [meskak a buk ____i]]]]]]]
 who 3-said that saw that give-me book
 'Who did Droteo say that he saw give me a book?'

(2) Topicalization of the object of a perfective verb:

[a blai_i [a lesilsebii ____i / (*er ngii) a se'elik]]
 house 3-Pst-Pf-burn-3s P 3s friend-my
 'My friend burned down the house'

(3) Topicalization of the object of an imperfective verb:

- a. [a ngikel_i [a longa er ngii_i / * ___ a Droteo]]
 fish 3-Imp-eat P 3s
 'Droteo is eating the fish'
- b. [a rengalek_i [a longelebed er tir_i / * ___ a sensei]]
 children 3-Imp-hit P 3pl teacher
 'The teacher is hitting the kids'

(4) WH-question of imperfective object:

[ngngera_i [ngmillengeduib' er ngii_i / * ___ a rubak]]
 what 3s-Imp-Pst-carve P 3s old-man
 'What did the old man carve?'

(5) Topicalization of oblique object:

[a ked_i [a lebilosii a belo'el er ngii_i a Droteo]]
 hill 3-Pf-Pst-shoot-3s pigeon P 3s
 'Droteo shot the pigeon on the hill'

It should be noted that extraction of the direct object of an imperfective verb leaves a resumptive pronoun (when the object is marked by er), likewise for oblique objects, while extraction of a perfective direct object leaves a gap. Examples (1)-(5) illustrate WH-movement or topicalization. The same complementarity of resumptive pronoun/gap obtains under relativization (there are no relative pronouns in Belauan):

(6) Subject relativized:

akmedengeli a 'ad_i [el [mil'erar a buk ____i/*_j er a 'ekabil]]
 1s-Pf-know-3s man Comp Pst-Pf-buy-3s book P girl
 'I know the man who bought the book from the girl'

(7) Perfective object relativized:

ak'iliuii a buk_i [el [lul'erar ____i/*_j a 'ad er a 'ekabil]]
 1s-Pf-Pst-read book Comp 3-Pst-Pf-buy-3s man P girl
 'I read the book that the man bought from the girl'

(8) Imperfective object relativized:

akmilsa er a buk_i [el [lulme'ar er ngii_i/*_j a 'ad er a 'ekabil]]
 1s-Imp-see P book Comp 3-Pst-Imp-buy P 3s man P girl
 'I saw the book that the man bought from the girl'

To sum up, the conditions inducing resumptive pronouns are quite straightforward: only extraction of an er-object involves (obligatorily) a resumptive pronoun; extraction of subjects and other NPs does not. In fact, all the positions that allow gaps are governed by some lexical category (N or V) that carries agreement morphology.[6] Perfective verbs, for example, agree in person and number with both the subject and object. I will return to this fact below. I assume here that P is not a proper governor in Belauan.[7] Note the free appearance of resumptive pronouns outside of syntactic islands, and the parallelism of relativization and WH-question formation. These points will be returned to below.

3. Coordination, Parasitic Gaps, and Islands

At this point, one may say that Belauan has two extraction strategies: one involving WH-movement in the syntax, with attendant coindexing of the moved phrase and the gap at S-structure, and the other involving base generation of a resumptive pronoun, coindexed with its A' binder at LF. Such a situation has been described for Hebrew, for example (data from Borer, discussed in Aoun 1981). But further investigation shows that this analysis is not accurate for Belauan. Data on coordination, parasitic gaps, and island constraints show that resumptive pronouns have all the syntactic properties of traces, and only one extraction process is at work.

3.1. Coordination Belauan obeys Ross' Coordinate Structure Constraint, as shown in (9):

analysis does not apply to (11) or, for example, to (4). On the contrary, we have seen that the incidence of resumptive pronouns and gaps in relative clauses and WH-questions is exactly parallel. The pronouns in these structures are not used to avoid island violations, but to satisfy the ECP. I conclude then, that the resumptive pronoun in (11) and (12), as well as in (3) - (5), does not have special binding properties, and is coindexed with its A'-binder at S-structure, where the binding of the gap takes place. This conclusion is not surprising in a language that uses resumptive pronouns so productively.

3.2. Parasitic gaps

A further argument that resumptive pronouns have the same properties as do empty variables at S-structure is the fact that they may license parasitic gaps. Parasitic gaps are assumed to be "licensed" through coindexing with a bound WH-variable at S-structure. Chomsky observes that since the resumptive pronoun is not a variable at S-structure, it may not license parasitic gaps. He (1982, p. 58) supports his analysis by citing cases from English in which, if a resumptive pronoun replaces one gap in a parasitic gap construction, it must replace both. Chomsky allows, however, that a language using the resumptive pronoun strategy more freely may not pattern this way. This is the case in Belauan. In fact, if resumptive pronouns and WH-traces are both bound at S-structure, it is not surprising to find that not only may resumptive pronouns license parasitic gaps, but also that WH-traces may license "parasitic" resumptive pronouns. Thus the paradigm arises in (13)a-d, which shows all four possibilities produced by the aspect distinction described above. I assume that all of the structures in question are produced by WH-movement:

- (13)a. ... WH-trace ... parasitic resumptive pronoun ...
 (perfective clause) (imperfective clause)
- b. ... resumptive pronoun ... parasitic gap ...
 (imperfective clause) (perfective clause)
- c. ... WH-trace ... parasitic gap ...
 (perfective clause) (perfective clause)
- d. ...resumptive pronoun...parasitic res. pronoun....
 (imperfective clause) (imperfective clause)

This paradigm is illustrated in (14)a-d. Note the alternation of perfective and imperfective verb aspect, and of gap and resumptive pronoun following the verb:

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- (14)
- a. a kukau a kall_i [el kirem [el ngikl_i ____i er u'ei er a 'omenga er ngii_i]]
 taro food Comp 2s-must Comp Pf-cook P before P 2-eat-Imp P 3s
- b. a kukau a kall_i [el kirem [el meliokl er ngii_i er u'ei er a 'omekelii ____i]]
 Imp-cook P 3s eat-Pf
- c. a kukau a kall_i [el kirem [el ngikl_i ____i er u'ei er a 'omekelii ____i]]
 Pf-cook eat-Pf
- d. a kukau a kall_i [el kirem [el meliokl er ngii_i er u'ei er a 'omenga er ngii_i]]
 Imp-cook P 3s eat-Imp P 3s
- (All four) 'Taro is food that you must cook before you eat'

The test usually applied to identify parasitic gaps is to replace the "real" gap with a lexical NP, and to see if the parasitic gap is then disallowed. The results of this test are seen in (15) and (16), which are ungrammatical.

- (15)
- *a kukau a kall_i el kirem el meliokl a meduu er u'ei er 'omonga er ngii_i
 taro food Comp you-must Comp cook breadfruit before you-eat P 3s
 (Taro is a food_i that you must cook breadfruit_j before you eat ____i)

- (16)
- *tia kid a buk el kirem el 'uiuii a newspaper a 'omome'ar
 this book that you-must read if you-buy ___
 (This is a book_i that you have to read a newspaper_j if you buy ____i)

How are the four structures in (13) to be given a unitary account? Like the coordinate structures (11) and (12), they clearly violate any parallelism constraint such as those suggested by Chomsky (1982) or by Safir (1983). In the discussion of coordination data above, I argued that gaps and resumptive pronouns are both bound at the same level of grammar, and concluded that that level was S-structure. Let us assume that this conclusion is correct. Then a natural account of these facts is found in the Connectedness Condition of Kayne (1983). Kayne's Connectedness Condition -- a version of the ECP -- requires not only proper government, but also that an empty category actually be connected to its antecedent within a g-projection of its governor (see the definitions in Kayne 1983); this view of the ECP incorporates the notion of recoverability. In the case of multiple variables, the Connectedness Condition requires that both variables be contained in a subtree of g-projections whose highest node dominates the antecedent. The properties of parasitic gaps fall out from the Connectedness Condition, which Kayne convincingly argues to apply at S-structure.

Referring to English, Kayne says that a resumptive pronoun and its antecedent do not seem to have the same S-structure relation as

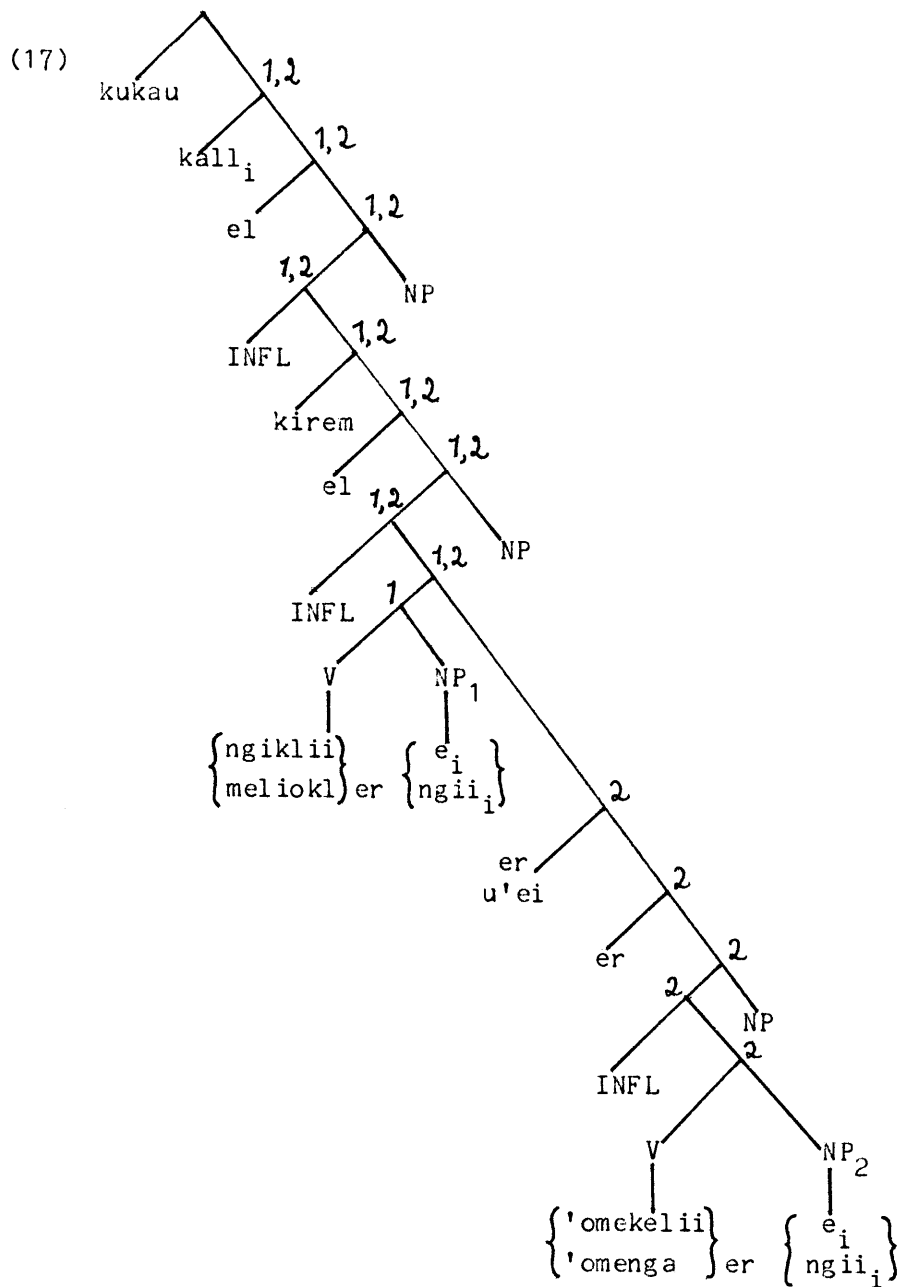
do a gap and its antecedent, in that the pronoun is not sensitive to the ECP, and does not license parasitic gaps. He concludes that the former relation is not subject to the Connectedness Condition. Resumptive pronouns in Belauan, however, are sensitive to the ECP, as they arise in positions that are not properly governed. Thus the conclusion that they are syntactic variables. Once this conclusion is admitted, we have a ready explanation of the structures in (13): they are all legitimate because the g-projection sets of their variables have Connectedness. Connectedness gives an intuitively satisfying explanation of what has been called the "licensing" of parasitic gaps by normal ones. The connectedness of the variations in (14) is seen in (17); note that the VP containing NP₁ and the VP containing NP₂ are contained in a subtree of g-projections of V that contains the antecedent kall.

Although Chomsky's analysis is disconfirmed by Belauan with respect to the licensing of parasitic gaps by pronouns, it is confirmed in a larger sense. Chomsky argues that the existence and properties of parasitic gaps should follow from principles of UG and not from language-specific rules, and only differences in the distribution of parasitic gaps should be attributed to language-particular properties. He also assumes, as mentioned above, that languages with a more vigorous resumptive pronoun strategy than English has should be the focus of study of the properties of resumptive pronouns. Belauan certainly illustrates both of these positions. The distribution of parasitic gaps follows from the language-particular lexical properties of verbs of different aspect, and of prepositions: perfective verbs directly and properly govern the direct object position, while the complements of imperfectives are not properly governed by the preposition. This is a different set of properties from those inducing resumptive pronouns in Swedish (Engdahl 1983b) or Irish (McCloskey 1983), for example. Belauan's active resumptive pronoun strategy systematically, rather than marginally, allows pronouns in structures that would normally contain gaps in English, structures which I assume to arise from syntactic operations.

3.3. Islands

That resumptive pronouns do not occur as part of a strategy to avoid island constraints is seen clearly in two sets of facts. One is the alternation of gap and pronoun in relative clauses (see examples (6)-(8)). I have noted that Belauan does not conform to the generalization (Chomsky 1982; Safir 1983) that resumptive pronouns do not occur in WH-questions, but only in special predication structures. In Chomsky's analysis, a relative clause containing a resumptive pronoun is an open sentence predicated of the head, which is satisfied at LF by matching the indices of the head and the pronoun. I assume that what Chomsky means by this is a syntactic analogy to lambda conversion, whereby the pronoun is taken as the argument that can be substituted into the relative clause, allowing interpretation of the clause as a statement containing a variable bound by the head.[3] But Belauan WH-questions and relative clauses are parallel, as we have

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(See (14) for the glosses.)

seen: the same complementarity of empty category and resumptive pronoun obtains in both structures -- either may contain a gap or a resumptive pronoun, depending on whether or not the extraction site is governed by the preposition *er* (as in examples (1) - (7)).[9] So in Belauan there is no motivation for the special LF coindexing rule.

Belauan grammar further demonstrates that resumptive pronouns are not a special type of variable by allowing island extraction using either a gap or a pronoun. The grammar refers only to the

lexical properties of the governor to determine the type of variable (seen in (18) and (19)).

(18) Extraction from a relative clause (the embedded object in the a sentence is plural, nonhuman, so is not marked by er):

a. [a bung_i [a lodengelii a delak a redil [el lomekeroul ____i]]]
 flower 3-Pf-know mother-my woman Comp 3-Imp-grow
 'Flowers, my mother knows the woman who grows ___'

b. [a buk_i [a kudengelii a 'ad [el lulme'ar er ngii_i]]]
 book 1s-Pf-know man Comp 3-Pf-buy P 3s
 'The book, I know the man who bought (it)'

(19) Extraction from an indirect question:

a. [a stoang_i [a luleker er a delal a buik [el kmo ngmo er ngii_i]]]
 store 3-asked P mother-3s boy Comp 3s-go P 3s
 'The store, the boy asked his mother if she's going to it'

b. [a mlai_i [a luleker er a delal a buik [el kmo ngmo me'erar ____i]]]
 car 3-asked P mother-3s boy Comp Pf-3s-Fut buy
 'The car, the boy asked his mother if she's going to buy ___'

A problem remaining with this analysis is how best to account for these island extractions. That is, what allows violation of Subjacency in these examples? Neither recoverability (see section 4) nor the Connectedness Condition can explain extraction out of a relative clause, for example. I believe that Belauan has a special relation to the Subjacency condition (see the discussion in Georgopoulos 1984).

4. Recoverability

I suggested earlier that the positions allowing gaps are those that are properly governed by some form of agreement. In other words, I adopt "Taraldsen's generalization", as described in Chomsky (1981) and Huang (1983), that pro-drop possibilities often correlate with rich inflectional morphology, the inflection allowing identification of the empty category. Most of the examples above have illustrated the facts of verb-object agreement (or lack thereof). Subject agreement, which also carries number and person features, allows Belauan to exhibit all the well-known properties of a null-subject language: empty NPs in subject position of tensed clauses, lack of "that-trace" effects, "long movement" of embedded subjects, and so on (see, for example, (1)b above, and (20)):

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- (20)a. [ngngera [ngmedengelii a tonari er keman [el [mirre'ore' ___]]]]
 what 3s-Pf-know neighbor P 1pl that Pst-Pass-steal
 'What does our neighbor know that ___ has been stolen?'
- b. [a Mary [a kltukl [el kmo [ngoltoir er a John ___]]]]
 clear that 3s-love P
 'It's clear that Mary loves John'
 (Mary (it's) clear that ___ loves John)

Possessor agreement in NPs completes the inventory of governors carrying agreement. In possessive NPs, the possessor follows the head; either the head agrees with the possessor, or the possessor is marked by er. The two types are illustrated in (21).

- (21) a. [a 'ole'esel a Toki]
 pencil-her_i Toki_i
 'Toki's pencil'
- b. [a sensei er a Droteo]
 teacher P Droteo
 'Droteo's teacher'

We predict, of course, that extraction of possessors leaves a (properly governed) gap in the (a) structures, and a resumptive pronoun in the (b) structures. This is the case, as seen in (22). Note that the head is not extractable at all, as the verb agrees with the complex NP and not with the head alone.

(22)

- a. [[ng'ilitii [a 'ole'esel a Toki] a John]]
 3s-Pst-throw pencil-3s
 'John threw away Toki's pencil'
- b. [a Toki [a le'ilitii [a 'ole'esel ___] a John]]
- c.*[a 'ole'esel [a le'ilitii [___ a Toki] a John]]
- d. [[ngdiak kudengei [el kmo ngngera [ngdilu er ngii
 3s-not 1s-know that what 3s-said P him
 [a sensei er a Droteo]]]]]
 teacher P
 'I don't know what Droteo's teacher said to him'
- e. [a Droteo [a diak kudengei [el kmo ngngera [a ledilu er ngii
 [a sensei er ngii]]]]]
- f.*[a sensei [a diak kudengei [el kmo ngngera [a ledilu er ngii
 [___ er a Droteo]]]]]

(In d - f, the pronoun 'to him' following the embedded verb is not a variable.)

It appears that only pronominals may become variables in Belauan. The variables in examples (1) through (14) and (18) - (22) are all base-generated pronominals that become variables by

coindexing with an A'-binder at S-structure: the gaps are pro (properly governed by verb-subject or verb-object agreement, or by "possessor agreement") and, of course, the resumptive pronouns are also pronominal.

5. Levels

I have shown in this paper that resumptive pronouns are syntactic variables in Belauan, in that they share crucial properties with gaps. If both pronoun and gap are coindexed with their antecedents at S-structure, this argues against a movement analysis of extraction sentences containing gaps, since the simplest and most general analysis is one in which both operator-gap and operator-resumptive pronoun structures are base-generated. Further, the Belauan facts fail to argue for a distinction between D-structure and S-structure, as they give no evidence of Move-A. (Engdahl (1983b) has argued to this effect using data from Scandinavian languages.) Similarly, if resumptive pronouns and gaps are bound variables at S-structure, sentences with resumptive pronouns do not argue for a distinction between S-structure and LF. In English, according to Chomsky, resumptive pronouns may not be coindexed with an A' binder at S-structure, because of their appearance in islands and their failure to license parasitic gaps; the distinction in levels of binding described above accounts for the pronouns' special behavior with respect to the syntax. But we have seen that what motivates this distinction for English is just not a fact in Belauan.

Belauan grammar does argue for a separate level of LF, however, in WH-question structures. Wide scope of a WH-phrase is optional in the syntax, so that we find sentences with the WH-phrase in situ parallel to sentences with the WH-phrase to the left of the verb.[10]

(23) a. a sensei er kau ngte'ang
 teacher P 2s who

b. ngte'a a sensei er kau ____
 who teacher P 2s
 Both: 'Who is your teacher?'

(24) a. kemil'erar a ngera er a stoang
 2s-Pst-buy what P store
 'What did you buy at the store?'

b. ngngera ngmillengeduib er ngii a rubak
 what Imp-3s-carved P 3s old-man
 'What did the old man carve?' (= (4))

(25) shows the interesting fact that the moved WH-phrase may come to rest in any intermediate COMP.

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(25)

- a. a Toki ngdilu [el kmo ngmilngiil er ngak [el mo meruul er a ngerang]]
 3s-said Comp 3s-Pst-wait P 1s Comp go Pf-do P what
- b. a Toki ngdilu [el kmo ngmilngiil er ngak [el ngngera_i bo kuruul er ngii_i]]
- c. a Toki ngdilu [el kmo ngngera_i lulengiil er ngak [el bo kuruul er ngii_i]]
- d. ngngera_i ledilu a Toki [el kmo ngmilngiil er ngak [el bo kuruul er ngii_i]]

All four: 'What did Toki say that he was waiting for me to do?'

Semantically, all of the structures in (23) through (25) are interpreted as direct questions in which the WH-phrase has wide scope. I assume, following May (1983), that a rule of WH-movement in LF is responsible for the wide scope of WH-phrases which are not moved, or are moved to an intermediate COMP, in the syntax. The various options for WH-movement in Belauan require a long and multi-faceted treatment, which is currently being worked out. I will end this section with the conclusion that direct questions do argue for a separate level of LF, a level at which certain WH-phrases are given the wide scope they do not have at S-structure.

6. What's the Difference?

Several suggestions have recently been made to account for the difference between languages like Belauan, Hebrew, Swedish, or Irish, which use resumptive pronouns freely, and languages like English. Chao and Sells (1983) propose that languages may be distinguished by what they call the "resumptive pronoun parameter" (RPP): languages like Belauan would have the value +RP and would allow pronouns as syntactic variables, and languages like English would have the minus value, -RP, disallowing this option. This approach is, however, little more than a restatement of the problem. A truly explanatory account would be one that derives from some general property of Belauan-type languages, or directly from principles of UG. Engdahl (1983b) suggests that the existence of resumptive pronouns in languages like Swedish and Irish reflects the optionality in UG of phonological content for WH-traces in these languages. Again, we would expect this optionality to be explained by a more general principle of UG.

Safir (1983) suggests that overt resumptive pronouns are not written out until PF, and are gaps at S-structure indistinguishable from other variables. Thus resumptive pronouns are exclusively a PF phenomenon. This suggestion raises a number of questions about where in the grammar the various principles of GB theory (including Safir's own Parallelism Constraint on Operator Binding) should apply, questions that cannot be answered without a full and explicit theory of PF. However, some implications of Safir's suggestion are clear. In English, for example, resumptive pronouns can be used to avoid island violations, as they are interpreted as pronouns, not variables, at S-structure. If they were actually gaps at S-structure, then they would have to be bound, and island violations would result. What,

then, accounts for the grammaticality of the sentences in question? In Irish, resumptive pronouns have been argued to be correlated with complementizer alternation (see McCloskey 1979, 1983), clauses in which pronouns are bound having a different complementizer than clauses containing traces. An alternative account of the Irish facts in Harlow (1981) analyzes resumptive pronouns, as I have for Belauan, in terms of the ECP: an extraction site that is not properly governed by agreement contains a pronoun. In either account the pronoun must be present in S-structure. Similarly, as prepositions are not proper governors in Belauan, they cannot be "stranded". In all these cases, an account having a gap at the S-structure position of the pronoun would not be able to account for the facts.[11] In addition, one would want to know why some gaps are rewritten as pronouns in PF and others are not -- both in languages like English and languages like Belauan. Why is it, for example, that only an island-violating gap becomes a pronoun in English, but only the gap following a preposition becomes a pronoun in Belauan? Clearly, this argument needs more structure before it can be constructively addressed.

I would like to conclude by turning the issue of resumptive pronouns in another direction. Instead of asking why resumptive pronouns are possible, as is usually done, I suggest that we ask, for languages regularly allowing resumptive pronouns, why do gaps occur? Then an explanation falls out naturally: gaps occur where agreement is rich enough to allow their presence. In this case there is no need for a resumptive pronoun. How well this explanation generalizes across "resumptive pronoun languages" remains to be seen.

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[1] Also known as Palauan; the spelling used in this paper reflects the pronunciation of native speakers, and I propose to adopt it here and in future work.

[2] The examples in this paper follow the standard orthography except for these cases: ! represents the glottal stop, replacing orthographic ch; ng represents the velar nasal phoneme; orthographic e may represent either /e/ or schwa.

[3] Josephs (1975) claims that Belauan has SVO order, taking a subject-first topicalized structure to represent the basic order. I

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have discussed the problems arising from such an interpretation elsewhere (Georgopoulos 1983b) and will not mention it further here.

[4] Preposition-like functions may be found in prepositionless structures, for example, in the use of obligatorily possessed nouns:

'alsel a blai
inside-its house
'inside the house'

Extraction of the "possessor" in these phrases does not involve resumptive pronouns.

[5] a is a "constituent marker" appearing before certain NPs and VPs: it will not be glossed. Abbreviations are

Imp imperfective
P preposition
Pf perfective
pl plural
s singular

[6] This was first brought to my attention by Sandy Chung (p.c.).

[7] Kayne (1981a and class notes, 1983 Linguistic Institute) has proposed that P is never a proper governor in any language. See also note 4.

[8] Truth conditions do not seem to enter into this account.

[9] It should be noted that passives, which do not involve operator-variable binding (or transitive verbs), also do not involve resumptive pronouns. Thus NP-traces never correspond to pronouns:

(i)a. ng mle mekang a kall
 3s Pst Pas-eat food

 b. a kall a mle mekang [e] /*ngii
 food Pst Pas-eat
 Both: 'The food got eaten up'

These data confirm the distinction drawn by Chomsky between NP-trace and WH-variable, or what Engdahl (1983a) calls the "distinction between local and nonlocal dependencies."

[10] I have not yet fully investigated the conditions governing these alternations, nor have I adequately explored relative scope in multiple interrogation questions; it is difficult to elicit judgments of scope in the latter.

[11] Of course, the ECP and its effects as described here may be a PF phenomenon. Chomsky (1981, ch. 4) considers and rejects this possibility, based on a number of arguments. For purposes of this paper, I will assume that the ECP must be satisfied at S-structure.

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