Anaphoric R-Expressions as Bound Variables[*]

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Abstract: San Lucas Quiaviní Zapotec (SLQZ), an Otomanguean language of Mexico, regularly allows apparent Principle B and C violations: R-expressions and pronouns can appear to be locally and non-locally bound by identical arguments. For this reason, the Zapotec languages have been claimed to be among those in which Principle C is not operational. This paper will show, however, that bound names in SLQZ do not constitute Principle C violations. Rather, they are anaphoric variables spelled out as copies of their antecedents. Evidence for this proposal comes from the fact that bound copies are interpreted as bound variables in VP deletion contexts, and from the fact that strong and weak crossover effects hold robustly in the language, showing that Principle C is operational. This paper will also show that identical facts hold in Thai, another language thought to lack Principle C.

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1. Overview

San Lucas Quiaviní Zapotec (SLQZ), an Otomanguean language spoken in southern Mexico, regularly allows apparent Principle B and C violations: Pronouns may bind identical pronouns, and R-expressions identical R-expressions:[1]

1. R-yu'lààa'z Gye'eihlly Gye'eihlly
   hab-like Mike Mike
   "Mike likes himself."

2. R-yu'lààa'z-ëng la'anng
   hab-like-3s.prox 3s.prox
   "He/she likes himself/herself."

3. R-cààa'z bxuuhahz ch-iia bxuuhahz
   Hab-want priest irr-go priest
   "The priest wants to go."

4. A w-nalààa'z bxuuhahz g-uhcnèe Lia Paamm bxuuhahz
   Already perf-remember priest perf-help fem.Pam priest
   "The priest$_i$ remembered that Pam helped him$_i$."

This pattern holds in a number of other Zapotec languages as well. The same pattern has been documented in Thai, and used as evidence that application of Principle C across languages is subject to parametric variation (Lasnik 1986).

In this paper, I will propose that 'bound' pronouns and R-expressions in these languages are not in fact violations of Principles B and C. Rather, they are bound variables spelled out as copies of their antecedents. This is consistent with the view that reflexive predicates represent functions mapping a single argument to both argument positions (Reinhart and Reuland 1993):

5. λx (P..x…x..)

SLQZ lacks a morphologically distinct series of anaphors. Hence, it expresses anaphoric relations by spelling out bound variables as copies as their antecedents.

In Part 2 of this paper, I will present evidence for the anaphoric status of bound copies, and show that Principles B and C do hold in SLQZ. In Part 3, I will show that bound copies are treated semantically as bound variables in SLQZ, and not as independently referential expressions. Part 4 will show that putatively bound R-expressions in Thai are also bound variables, and that Principle C also holds in the language. In Part 5, I will show that bound copies in complement and adjunct clauses are long-distance anaphors. In Part 6, I will show that non-locally bound copies are related to their antecedents by overt A' movement.

2. Evidence for the Anaphoric Status of Bound Copies

There are two pieces of evidence that R-expressions and pronouns in SLQZ are subject to Principles B and C: one is the restriction on possible antecedents to 'bound' R-expressions and pronouns; the second is the robustness of crossover effects.

2.1. The 'Identical Antecedent' Requirement

It is not the case that R-expressions and pronouns can be freely bound in SLQZ. Rather, they can only be bound by identical elements: I will refer to this restriction as the Identical Antecedent Requirement.

Pronouns cannot be locally bound by R-expressions (7), nor by pronouns differing in person, number, or other features (8).[2] Likewise, R-expressions may not be bound by pronouns (9), nor by different R-expressions (10):

7. R-yu'làà a'z Gye'eihlly$_i$ la'anng
   hab-like Mike 3s.prox
   "Mike likes him/*himself."

8. R-yu'làà a'z -ih$_i$ la'anng
   Hab-like-3s.prox 3s.dist.
   "He/she$_i$ likes him/her$_{j/*i}$."

9. B-gwi'ih-ëng lohoh Gye'eihlly
   perf-look-3s.prox at Mike
   `"He$_i$ looked at Mike$_{i/*i}$"

10. R-yu'làà a'z Gye'eihlly me's
    hab-like Mike teacher
    "Mike$_i$ likes the teacher$_{j/*i}$."

These data show that R-expressions and pronouns cannot be regularly bound in SLQZ. This suggests that Principles B and C do indeed hold in SLQZ.

2.2 Crossover Effects

SLQZ shows both strong and weak crossover effects, which provide further that Principle C holds in SLQZ. (11) shows an example of strong crossover effects. WH-movement is obligatory in SLQZ, and it targets the immediate preverbal position. In (11), the wh-word *tu* 'who' must refer to a set of possible people other than 'he' or 'Felipe'.

11. Q: Tu r-ralloh la'anng r-yu'lààa'z (t) Li'eb (t)
Who hab-think 3s.prox. hab-like Felipe
"Who does he think Felipe likes?/'Who does he think likes Felipe?"

A: Lia Paamm-zhi'
Ms. Pam-maybe
"Maybe Pam."

Weak crossover effects surface in wh-questions containing the reflexive-possessive marker *-ni'*.*-Ni'* requires a locally c-commanding lexical (or quantificational) antecedent. Because SLQZ uses no subject agreement morphology with lexical subjects or wh-words, argument wh-questions are often ambiguous between subject and object question readings. (This ambiguity is seen in (11)). Wh-questions containing arguments with *–ni'*, however, are unambiguous: in (12), the possessed nominal *x:nnàaanni'*,'his/her mother', can only be interpreted as the object of the sentence:

12. Tu r-yu'lààa'z t x:-nnàaan-ni' *t
who hab-like gen-mother-refl.poss
"Who like his/her own mother/*Who does his/her own mother like?"

Here, the wh-trace can only be interpreted as the obligatory binder for *–ni'*.

To sum up, the presence of crossover effects in SLQZ provides independent evidence that Principle C holds in the language.

3. The Interpretation of Bound Copies

The semantic behavior of 'bound' R-expressions and pronouns shows that they should not be treated as true referential arguments. Bound copies of R-expressions and pronouns behave semantically as bound variables. In VP-deletion contexts, locally bound copies only allow sloppy readings:

13. B-gwi'ih Gye'eihlly lohoh Gye'eihlly zë'cy cahgza' Li'eb
perf-look Mike at Mike likewise Felipe
"Mike looked at himself, and Felipe did too." (Felipe looked at himself/*Mike")

14. R-yu'lààa'z -ëng la'anng chiru' zë'cy cahgza' Gye'eihlly
hab-like-3s.prox 3s.prox also likewise Mike
"He/she likes himself/herself, and Mike does too." (Mike likes himself/*him/*her)

This shows that SLQZ bound copies have no independent referential force. Bound variable readings have been considered a defining feature of anaphors; the fact that bound copies behave as bound variables suggests that they are syntactically and semantically anaphors.

3.1. Quantified Arguments in Reflexive Constructions

The bound variable status of bound copies in SLQZ is supported by constraints on reflexivization of quantified arguments. Unlike referential or pronominal subjects, quantified subjects cannot be copied in reflexive constructions:

15. *B-guhty cho'nn ra bxuuhahz cho'nn ra bxuuhahz
perf-kill three pl. priest three pl. priest
"Three priests killed themselves."

This constraint also holds in the related, but mutually unintelligible language Quiegolani Zapotec (QZ). QZ also allows apparent Principle C violations, which also seem to involve exact copies of an antecedent, but disallows bound copies of quantified expressions (Black 1994):

16. W-eey Benit mëlbyuuu ne y-ged Benit lo x-mig
Comp-take Benito fish that p-give Benito face poss-friend

Benit Jasint
Benito Jacinto
"Benito took a fish, which he gave to his friend Jacinto". (Black 1994, p. 97)

17. R-a txup tson wnaa r-ka men gyus
Hab-go two three woman hab-buy 3p pot
"A few women went to buy a pot." (Black 1994, p. 103)

18. ??R-a txup tson wnaa r-ka txup tson wnaa gyus
Hab-go two three woman hab-buy two three woman pot
"A few women went to buy a pot." (Black 1994, p. 103)

SLQZ uses a different pattern to express reflexive relations involving QPs: the quantified subject is generated as a preverbal topic, and the actual subject of the reflexive predicate is realized as a distal pronoun. The reflexive object is realized as a bound copy of the pronoun subject: [3]

19. Cho'nn ra bxuuhahz b-guhty-rih la'arih
Three pl priest perf-kill-3p.dist 3p. dist
"Three priests killed themselves."

20. Yra'ta' ra bxuuhahz b-guhty-rih la'arih
Every pl priest perf-kill-3p.dist 3p. dist
"Every priest killed himself."

In this reflexive construction, the distal pronouns act as variables bound by the topicalized QP. This is consistent with the semantics of these expressions, schematized informally as follows:

21. Three x [(priest)x and (killed)(x)(x)]

SLQZ and QZ cannot use the bound copy strategy with quantified arguments because bound copies of QPs cannot appear—at least not with a reflexive reading—without causing a semantic type clash. Recall

from (5) that reflexive predicates are assumed to be functions mapping a single argument to both argument positions:

22. λx (P..x…x..)

Thus, a reflexive predicate such as “kill oneself” would have the following semantic representation:

23. [[kill oneself]]: =[λx D. λx D. x kill x]

According to this representation, then, bound copies must be of type *e*. Thus, a simple reflexive expression such as (1), repeated below, gets the representation in (25):

24. R-yu’lààa’z Gye’eihlly Gye’eihlly
hab-like Mike Mike
“Mike likes himself.”

25. [[Mike likes himself]]:=[λx D. λx D. x likes x] (Mike) = 1
(fig 25 here)

If the reflexive argument is a QP, however, a type clash occurs. Consider the ungrammatical example (15), repeated below:

26. *B-guhty cho’nn ra bxuuhahz cho’nn ra bxuuhahz
perf-kill three pl. priest three pl. priest
“Three priests killed themselves.”
(fig 27 here)

Here, the two quantified arguments are unable to combine typewise with the predicate.

One possible means of making this structure licit is to type-shift one or both copies. Assuming both copies raise at LF, the following structure will result:
(fig 28 here)

While allowable, this LF structure does not denote the intended reflexive reading: it can only be interpreted to mean that three priests killed three other priests.

In the licit reflexive structure, on the other hand, the reflexive arguments are overtly realized as pronominal variables (thus, elements of type *e*), with the QP base-generated in an A’ (operator-like) position:

29. Cho'nn ra bxuuhahz b-guhty-rih la'arih
Three pl priest perf-kill-3p.dist 3p. dist
"Three priests killed themselves."
(fig 30 here)

Here, a single QP takes scope over both pronominal variables in the reflexive predicate, giving the desired reading.

Thus, the inability of quantified arguments to appear as bound copies is consistent with the bound variable status of anaphoric copies in SLQZ: variables are elements of type *e*, and only elements of type *e* may appear as bound copies.[4]

4. Bound Copies in Thai as Bound Variables

Another language that has been claimed to be exempt from Principle C effects is Thai (Lasnik 1986). Like SLQZ, it apparently allows R-expressions to be bound, both locally and non-locally:

31. John konnuad John
John shaved John
"John shaved himself.'

32. Aajarn kid waa puak rua chob aajarn
teacher think that all we like teacher
"The teacher$_i$ thinks we like him$_i$."

Lasnik notes that R-expressions cannot be bound by pronouns:

33. *Khaw chɔɔp John
he likes John
"He$_i$ likes John$_i$." [Lasnik 1986, p.154]

He attributes this to a binding hierarchy: more referential DP types can bind less referential ones, but not vice versa. Thus, R-expressions can (non-locally) bind pronouns across languages, but not vice-versa, even in languages where Principle C does not hold.

However, the referential hierarchy does not explain why bound Thai R-expressions, like bound copies in SLQZ, obey the Identical Antecedent requirement. As in SLQZ, even different definite R-expressions cannot bind each other locally:

34. *John konnuad aajarn
John shave teacher
" $John_i$ shaved the $teacher_i$."

Both the binding and the bound R-expressions here are equally referential; thus, there seems to be no violation of the binding hierarchy. Hence, the referentiality hierarchy account fails to explain the absence of possible coreference here.

Thus, Thai bound copies are subject to the same constraints as those in SLQZ, and thus should be treated as bound copies, rather than as true R-expressions. The semantics of Thai bound copies support this idea. Like their SLQZ counterparts, Thai bound copies also get sloppy (bound variable) readings in VP-deletion contexts:

35. John konnuad khong John lae Peter ko muankan
John shave of John and Peter the same
"John shaved himself, and Peter did too." (Peter also shaved himself)

Moreover, Thai, like SLQZ, also disallows bound copies of quantificational arguments:

36. *Thuk khon konnuad thuk khon
every one shave every one
"Everyone shaved everyone."

Unlike SLQZ, Thai does have an independent series of anaphoric pronouns. These pronouns must be used in reflexive expressions involving quantificational subjects:

37. Thuk khon konnuad tu:aeng
every one shave self
"Everyone shaved himself."

This shows that the only DPs that can be copied (or used anaphorically) in Thai reflexive constructions, as in SLQZ, are elements of type *e*.

This, along with their conformance to the Identical Antecedent Requirement, show that 'bound' R-expressions in Thai are also bound copies. Furthermore, as in SLQZ, Thai also shows crossover effects:

38. MQ khong kao chçb krai
Mother his_i like who_j"
"Who_j does his_i mother like?"

This suggests that Thai, along with SLQZ, also obeys Principle C. Putative binding violations are simply results of anaphors being spelled out as copies of their antecedents.

5. Bound Copies as Long-Distance Anaphors

In SLQZ, bound copies appear in a number of contexts where standard anaphors are typically disallowed. These contexts show that long-distance reflexive relations hold in SLQZ, and that non-locally bound copies should be treated as long-distance anaphora.

5.1. Bound Copies as Nominative Anaphors

Bound copies can appear as subjects of embedded finite clauses. In these contexts, they are also interpreted as bound variables:

39. R-cààa'z Gye'eihlly g-ahcnèe Gye'eihlly Lia Paamm
Hab-want Mike irr-help Mike fem. Pam

zë'cy cahgza' Li'eb
likewise Felipe
"Mike wants to help Pam, and so does Felipe." (Felipe also wants to help Pam/also wants Mike to help Pam)

Subject bound copies in embedded clauses obey the Identical Antecedent requirement:

40. R-cààa'z Gye'eihlly g-ahcnèe-ng Lia Paamm
Hab-want Mike irr-help-3s.prox fem. Pam
"$Mike_j$ wants $him/her_{i/*j}$ to help Pam."

5.2. Embedded object copies

Bound copies can also appear as objects of embedded clauses. Unlike bound copies in subject position, however, they are not subject to the Identical Antecedent requirement: a pronoun coreferenced with a matrix subject may appear as an embedded clause object. (My consultant, however, often prefers to interpret pronoun objects in embedded clauses as disjoint from the matrix subject):

41. R-ralloh Gye'eihlly r-yu'lààa'z Lia Paamm Gye'eihlly
Hab-think Mike hab-like fem. Pam Mike
"Mike$_i$ thinks Pam likes him$_{i.}$"

42. R-ralloh Gye'eihlly r-yu'lààa'z Lia Paamm la'anng
Hab-think Mike hab-like fem.Pam 3s.prox
"Mike$_i$ thinks Pam likes him $_{j/?i}$."

Object bound copies in embedded clauses also differ from subject copies in that they do not always get bound variable readings; in some cases, a referential reading is also possible:

43. R-ralloh Gye'eihlly r-yu'l ààa'z-ënn Gye'eihlly
Hab-think Mike hab-like-1p Mike
"Mike$_i$ thinks we likes him$_i$,

chiru' zë'cy cahgza' Li'eb
also likewise Felipe
and so does Felipe."
(Felipe thinks Pam likes Mike/ Felipe thinks Pam likes him)

This, however, is not necessarily evidence against the anaphoric status of the bound copy. Thráinsson (1991) notes that in Icelandic, the long-distance anaphor *sig* allows both strict and sloppy readings in VP-deletion contexts when its antecedent binds it across a clause, but allows only a sloppy reading when bound locally:

44. Jón rakaDi sig og Péter gerDi DaD líka
John shaved self and Peter did so too. (=/= Peter shaved John)

45. Jón sagDi [aD Dú hefDir svikiD sig] og Péter gerDi DaD líka

John$_i$ said that you had betrayed self$_i$ and Peter did so too.

(Peter$_i$ said that you betrayed him$_i$ / Peter said that you betrayed John)

This shows that SLQZ bound copies show the same interpretive behavior as local and long-distance anaphors crosslinguistically.

The possibility of strict interpretation of the bound copy in (43) and (45), however, does not necessarily force the conclusion that the copy is truly referential. Koopman and Sportiche 1989, citing Sells 1987, note that even pronouns with obvious bound variable readings may get non-sloppy readings in VP deletion contexts:

46. With each new Hollywood hit, the lead actress thinks she is the new Monroe, and the director does, too. (Sells 1987)

Here, it is possible to interpret the sentence to mean that the director thinks the lead actress is the new Monroe, even though the pronoun *she* is a bound variable under the scope of *each*. From this, Koopman and Sportiche conclude that the mere possibility of sloppy readings, not the necessity for them, is an adequate diagnostic for bound variable status.

5.3. Bound Copies in Adjunct Clauses

Bound copies also appear in adjunct clauses, as seen in the following example:

47. Zi'cygàa' nih cay-uhny Gye'eihlly zèèiny b-ìi'lly-ga' Gye'eihlly
While that prog-do Mike work perf-sing-also Mike
"While Mike was working, he sang."

This is consistent with the analysis of non-locally bound copies as long-distance anaphora.
As noted by Huang and Tang (1993), Chinese long-distance anaphors may also appear in adjunct clauses with antecedents in main clauses:

48. Ta zhidao [[suiran Lisi piping-le ziji] dajia haishi hen xihuan ta
He know though Lisi criticise-ASP self all still very like him
"He$_i$ knows that although Lisi$_j$ criticized self$_{i/j}$ we still like him."

Bound copies in adjunct clauses get bound variable readings and are subject to the Identical Antecedent requirement:

49. Zi'cygàa' nih cay-uhny Gye'eihlly zèèiny b-ìi'lly-ga' Gye'eihlly
While that prog-do Mike work perf-sing-also Mike

zë'cy cahgza' Li'eb
likewise Felipe
"While Mike was working, he sang, and so did Felipe." (Felipe also sang while he worked)

50. Zi'cygàa' nih cay-uhny Gye'eihlly zèèiny b-ìi'lly-ga'-ng
While that prog-do Mike work perf-sing-also-3s.prox
"While Mike was working, he/she (someone else) sang."

These examples show that the bound copies here are semantically dependent on their antecedents, as are local anaphors. The syntactic dependencies between copies and their antecedents in these cases will be described in Section 6.2.

5.4. Bound Copies vs. Repeated Arguments

Lexical arguments can also be repeated in contexts in which they are not c-commanded by—and thus, not syntactically bound by—their antecedents:

51 R-yu'lààa'z me's nih r-umbèe' Lia Paamm Lia Paamm
Hab-like teacher REL hab-know fem. Pam fem. Pam
"The teacher who knows Pam_i likes her_i."

Here, the repeated argument is not a bound copy, but simply a repeated argument. This does not constitute a Principle C violation since the coreferenced expression is not c-commanded by its antecedent in the relative clause. Thus, this sentence is equivalent to English examples in which the same pattern holds:

52. The only linguist who respects John is John.

In these contexts the Identical Antecedent requirement does not hold:

53. R-yu'lààa'z me's nih r-umbèe' Lia Paamm la'ang
Hab-like teacher REL hab-know fem. Pam 3s.prox.
"The teacher who knows Pam_i likes her_i."

This supports the view that the second instantiation of 'Pam' in (51) is not an anaphor, but an independently occurring argument.

That duplicated arguments in structures such as (51) are independent arguments is supported by the fact that they don't allow bound variable readings:

54. R-yu'lààa'z me's nih r-umbèe' Lia Paamm Lia Paamm
Hab-like teacher REL hab-know fem. Pam fem. Pam
"The teacher who knows Pam likes her,

zë'cy cahgza' me's nih r-umbèe' Li'eb
likewise teacher REL hab-know Felipe
and so does the teacher who knows Felipe"

This sentence can only mean that both teachers like Pam, not that the second teacher likes Felipe. Hence, the second, instantiation of *Pam* in (51) is a true R-expression with independent referential force.

6. The Syntax of Bound Copies in SLQZ

In the previous sections, I showed that bound copies can behave as both local and long-distance anaphora. In this section, I will propose a syntactic account for their distribution.

Locally bound copies are base-generated as empty variables, and spelled out as copies of their antecedents. This proposal will be motivated in Section 6.2.2.

I will also show that non-locally bound copies are related to their antecedents by overt movement. In contrast to Hornstein (2001), however, I will argue that the movement involved in licensing coreference relations is A'-movement, rather than A-movement.

Evidence for this comes from the distribution of zero anaphora in SLQZ, which appear only in positions from which long-distance A'movement is independently possible. For this reason, I will argue that zero anaphora are traces of overt A'-movement.

In contrast, non-locally bound copies obligatorily appear in positions from which long-distance A' movement of other types (such as focus and wh-movement) is disallowed. Thus, non-locally bound copies are resumptive residues of illicit movement

6.1. Zero anaphora as a diagnostic for overt movement

Zero anaphora also appear in SLQZ. However, they appear in a much smaller number of contexts than do bound copies. These contexts are those in which long-distance A' movement of other constituents is independently possible. This suggests a connection between the occurrence of zero anaphora and the possibility of movement: in this section, I will show that zero anaphora are traces left by overt A' movement of a null pronoun.

6.1.1. Zero anaphora in clauses with subjunctive mood

The most common context in which zero anaphora appear is as subjects of embedded clauses marked with subjunctive mood.

55. R-cààa'z Lia Paamm g-ahcnèe (Lia Paamm) Gye'eihlly
Hab-want fem. Pam irr-help (fem. Pam) Mike
"Pam wants to help Mike."

56. B-yennlààa'z bxuuhahz ny-ahcnèe (bxuuhahz) Gye'eihlly
Perf-forget priest subj-help priest Mike
"The priest forgot to help Mike."

The embedded clause subject receives a bound variable reading whether or not it is overtly realized:

57. R-cààa'z bxuuhahz g-ahcnèe (bxuuhahz) chiru'
Hab-want priest irr-help (priest) also

zi'cy cahgza' Lia Paamm
likewise fem. Pam
"The priest wants to help, and so does Pam." (Pam also wants to help/*Pam also wants the priest to help)

Zero anaphora are only allowed in complements of verbs that select Irrealis or Subjunctive verbal aspect markers on in their complements. Verbs that require their complements to have Irrealis or Subjunctive aspect marking (among them 'want', 'forget', and 'persuade') correspond roughly to verbs taking subjunctive complements in Romance.

The Irrealis and Subjunctive aspect markers in SLQZ, however, also appear in indicative contexts. In matrix clauses (and in complements of verbs that don't have selectional requirements on the aspect marking of their complements) Irrealis-marked verbs typically express simple future readings:

58. Y-to’oh Gye’eihlly ca’rr
Irr-sell Mike car
“Mike will sell the car.”

59. Zi’cy nnah Gye’eihlly yzh:ii y-nniinèe Gye’eihlly Li’eb
Thus neut-say Mike tomorrow irr-talk.with Mike Felipe
“Mike says he will talk to Felipe tomorrow.”

Subjunctive-marked verbs in matrix clauses express unrealized actions:

60. B-èèinychìia’ Li’eb nih g-a’uh Gye’eihlly chiru’ cuann
Perf-make Felipe REL irr-eat Mike then

buarr-ag ny-a’uh-ih
donkey-that subj-eat-it
“Felipe made something for Mike to eat, but that ass didn’t eat it.”

Zero anaphora may appear in neither embedded clauses lacking Subjunctive or Irrealis marking, nor in embedded Subjunctive or Irrealis clauses not subcategorized by the matrix verb:

61. Nàannag bxuuhahz g-uhcnèe bxuuahahz Lia Paamm
Neut-know priest perf-help priest fem. Pam
“The priest knew he helped Pam.”

62. Nàannag bxuuhahz g-uhcnèe Ø Lia Paamm
Neut-know priest perf-help Ø fem. Pam
*”The priest knew he helped Pam”/“The priest knew Pam helped.”

63. * Zi’cy nnah Gye’eihlly yzh:ii y-nnìi’nèe Ø Li’eb
Thus neut.say Mike tomorrow irr-talk.with Ø Felipe
“Mike says he will talk to Felipe tomorrow.”

Thus, modality plays a role in the licensing of zero anaphora. Subjunctive clauses cross-linguistically are known to be transparent for long-distance binding. Under current theories that long-distance anaphora are

related to their antecedents by movement (Pica 1991, Huang and Tang 1991, among others), this suggests that zero anaphora could be traces of overt movement.

There are two pieces of evidence that support the overt movement hypothesis: (1) long-distance focus movement out of complements with subjunctive mood, and (2) contexts in which zero anaphora obligatorily appear.

6.1.2. Focus movement out of subjunctive and indicative clauses

In SLQZ, contrastive focus is realized by overt movement of the focused constituent to the immediate preverbal position. This is seen in the contrast between (64) and (65):

64. B-to'oh Li'eb ca'rr
Perf-sell Felipe car
"Felipe sold the car."

65. Li'eb b-to'oh ca'rrr
Felipe perf-sell car
"FELIPE sold the car (not someone else)."

Focus-fronting may also occur in embedded clauses with indicative mood:

66. A nàann Gye'eihlly [b-eeiny behts Gye'eihlly gaan]
Already neut-know Mike perf-do brother Mike win
"Mike knows his brother won."

67. A nàann Gye'eihlly [behts Gye'eihlly b-eeiny t gaan]
Already neut-know Mike brother Mike perf-do win
"Mike knows HIS BROTHER won."

Focus-fronting, unlike wh-movement, is not cyclic: a focused argument of an indicative embedded clause may not raise to the front of the matrix clause:

68. *Behts Gye'eihlly a nàann Gye'eihlly [t b-èèiny t gaan]
brother Mike already neut-know Mike perf-do win
"Mike knows HIS BROTHER won."

Subjunctive embedded clauses, however, show a different focus-fronting pattern: they allow long-distance focus-fronting, but not clause-internal focus fronting:

69. Ca-bèez Gye'eihlly [g-ùuny behts Gye'eihlly gaan]
Prog-expect Mike irr-do brother Mike win
"Mike expects his brother to win."

70. Behts Gye'eihlly ca-bèez Gye'eihlly [g-ùuny gaan]
Brother Mike prog-expect Mike irr-do win
"Mike expects HIS BROTHER to win."

71. *Ca- bèez Gye'eihlly [behts Gye'eihlly g-ùuny gaan]
prog.-expect Mike brother Mike irr-do win
"Mike expects HIS BROTHER to win."

72. B-quìi'lly Gye'eihlly Li'eb [g-ahcnèe (Li'eb) Gye'eihlly]
Persuade Mike Felipe irr-help (Felipe) Mike
"Mike persuaded Felipe to help him."

73. Li'eb b-quìi'lly Gye'eihlly [g-ahcnèe Gye'eihlly]
Felipe perf-persuade Mike irr-help Mike
"Mike persuaded FELIPE to help him."

This is consistent with the suggestion made by Koopman and Sportiche 1989 (citing Kempchinsky 1986) that subjunctive clauses lack complementizer positions, and by extension, the CP projection.

Further evidence that clauses with subjunctive mood lack (at least some) CP projections in SLQZ is the fact that adjunct wh-questions can only be interpreted as questioning matrix predicates, not embedded predicates:

74. X:aa b-èèiny Gye'eihlly b-quìi'lly Gye'eihlly Li'eb
how perf-do Mike perf-persuade Mike Felipe

g-ahcnèe' Li'eb Gye'eihlly?
irr-help Felipe Mike
"How did Mike persuade Felipe to help him?"

My consultant volunteered (75) as a plausible possible answer to (74), but considered (76), while grammatical, not a felicitous answer to the question.

75. R-e'ihpy Gye'eihlly la'anng y-dei'by bzyaan-ni' y-ca'ang
Hab- tell Mike 3s.prox irr-let sister-refl.poss irr-marry-3s.prox
"Mike told him he'd let his sister marry him."

76. #B- quìi'lly Gye'eihlly Li'eb quìi'by Li'eb ca'rr
perf-persuade Mike Felipe irr-wash Mike car
"Mike persuaded Felipe to wash the car."

Wh-movement in SLQZ, unlike focus movement, is cyclic and subject to subjacency : long-distance wh-movement may not occur out of wh-islands in SLQZ, for instance. This contrast between (75) and (76) as possible answers to (74) suggests that wh-movement out of the embedded clause is blocked, which would be consistent with the absence of CP.[5]

A potential problem for this account, however, is the fact that argument wh-expressions, may be fronted out of subjunctive clauses:

77. Tu b-quìi'lly Gye'eihlly Li'eb g-ahcnèe' Li'eb
Who perf-persuade Mike Felipe irr-help (t) Felipe (t)
"Who did Mike persuade Felipe to help?/Who did Mike persuade to help Felipe?"

This pattern parallels that of subjacency-violating wh-in-situ questions in Chinese (Huang 1982): subjacency may be violated by LF-movement of an object wh-expression (78), but not by LF movement of an adjunct wh-expression (79):

78. [wo mai shenme] zui hao
I buy what most good
"What is it best that I buy?" (lit: *What that [I buy t] is best?)

79. *[wo weishenme mai shu] zui hao
I why buy book most good
"Why is [that I buy the books t] best?" (Huang 1982)

This contrast in Chinese was attributed to the ECP: object traces are properly governed via head-government by the verb, but subject and adjunct wh-traces are not.

While head-government by the verb government is not longer considered a usable strategy under minimalist assumptions (and can't account for the grammaticality of the SLQZ example in (77) in any case, since SLQZ is a VSO language and subject extraction is permitted), it can be assumed that for whatever reason, subjacency violations by object wh-expressions are better tolerated across languages than those involving wh-movement from adjuncts. This is also seen in English:

80. *How did you say who fixed the car t ?
81. ?Which car do you know how they fixed t?

The possibility of long-distance focus movement and argument wh-movement out of subcategorized Irrealis clauses shows that their subjunctive mood makes them transparent for some non-local movement. The fact that zero anaphora occur in exactly the contexts in which long-distance A' movement is possible—and are disallowed from contexts in which such movement is not possible— suggests that they are themselves traces of overt A' movement.

The movement account is supported by the fact that traces are the only type of empty category that could plausibly serve as zero anaphors in SLQZ. Since SLQZ lacks infinitival sentences (all verbs are marked for tense and aspect), zero anaphora cannot be instantiations of PRO.[6] Another argument against their potential PRO status is the fact that they may appear interchangeably with overt arguments. (I will assume that overt bound copies in subjunctive contexts are optional resumptive copies.)

Zero anaphora could not be *pro* either. If they were simply null pronouns, overt pronouns should be able to appear freely as the subjects of subjunctive clauses as well. However, this proves not to be the case. Pronouns that are not copies of their antecedents cannot appear in these positions with a bound variable reading:

82. R-cààa'z Lia Paamm g-ahcnèe (Lia Paamm) Gye'eihlly
Hab-want fem. Pam irr-help (fem. Pam) Mike
"Pam wants to help Mike."

83. R-cààa'z Lia Paamm g-ahcnèe -ng Gye'eihlly
Hab-want fem. Pam irr-help-3s.prox. Mike
"Pam wants him/her to help Mike/*Pam wants to help Mike."

84. R-cààa'z-ëng g-ahcnèe -ng Gye'eihlly
Hab-want-3s.prox irr-help-3s.prox Mike
"He/she wants to help Mike."

Hence, I will assume that zero anaphora are traces of overt A'-movement.

I will assume (following EnC 1989) that operators can be associated with any maximal projection. Thus, subject-oriented null anaphoric elements in SLQZ raise to an operator position bound by AgrSP.

If this proposal is correct, this would mean that dependencies between long-distance anaphors and their antecedents in SLQZ are mediated by A'-movement, rather than A-movement. (This idea has been independently proposed for Chinese long-distance anaphora by Huang and Liu 2001.)

This raises the question of whether A'-movement may play a role in the licensing of long-distance anaphora universally. While a detailed investigation of this matter is beyond the scope of this paper, there is suggestive evidence that this may be the case. Many languages (such as Italian and Icelandic) allow long-distance binding of anaphors from outside subjunctive clauses, but not indicative clauses.

85. Jón$_i$ heyrDi [aD ég hefDi/ * hafDi svikiD sig$_i$]
John heard that I had(subj)/(ind) betrayed self (Icelandic: Thráinsson 1993)

Subjunctive clauses have been shown to be transparent for certain kinds of A'-movement or long-distance A' dependencies crosslinguistically (Koopman and Sportiche 1989, among others). That long-distance anaphora across a range of languages appear only in subjunctive clauses suggests a connection between the presence of long-distance anaphora and the possibility of long-distance A' dependencies.

Additional evidence for a movement analysis of zero anaphora comes from the fact that here are contexts in which overt bound copies are disallowed and zero anaphora are required. That zero anaphora are traces of movement is shown by the fact that movement in these contexts is forced for reasons independent of binding.

6.1.3. Zero anaphora and the local anaphor *–ni'*

One such context involves object-control verbs with objects containing the reflexive possessive marker *–ni*'. Before discussing the zero anaphora pattern, I will briefly describe the distribution and behavior of *–ni'*.

6.1.3.1. The reflexive possessive marker *–ni'*

-Ni' is the one element in SLQZ that appears to be a true anaphor. It is used to express possession by a local c-commanding R-expression:

86. B-to'oh Gye'eihlly x:-ca'rr-ni'
Perf-sell Mike gen.-car-refl.poss.
"Mike sold his own car."

87. Bùunny nih r-umbèe Li'eb g-uhcnèe behts-ni'
Man REL hab-know Felipe perf-help brother-refl.poss
"The man$_i$ who knows Felipe$_j$ helped his$_{i/*j}$ brother."

In the second example above, *-ni'* may take as its antecedent the whole DP and its relative clause, but not the relative clause object *Felipe*, which fails to c-command the possessed DP.[7]

Unlike bound copies, *-ni'* must be bound locally:

88. Zi'cy Ø-nnah Gye'eihlly [g-uhcnèe Li'eb behts-ni']
Thus neut-say Mike perf-help Felipe brother-refl.poss.
"Mike$_i$ said Felipe$_j$ helped his$_{j/*i}$ brother."

It also cannot appear in the subject of an embedded clause (indicative or subjunctive):

89. * Ca-bèez Gye'eihlly [g-ùuny behts-ni' gaan]
prog-expect Mike irr-do brother-refl.poss win
"Mike expects his brother to win."

SLQZ has no infinitival clauses; all verbs are obligatorily marked with tense/aspect markers. While anaphoric relations between bound copies and their antecedents may hold across long distances, *-ni'* appears to be constrained by the same strict binding conditions as English anaphors: it must be bound by the closest subject, and within a tensed clause.

6.1.3.2. *-Ni'* in object control contexts

Now I will turn to the distribution of *–ni'* in object control constructions. Object control verbs in SLQZ, such as *re'ihpy* 'tell' and *rquìi'lly* 'persuade', take complements with subjunctive mood, and thus allow the subject of the complement clause to be either suppressed or overtly realized:

90. R-e'ihpy Gye'eihlly Li'eb [y-chi'ih (Li'eb) ru'u-ni']
Hab-tell Mike Felipe irr-shut (Felipe) mouth-refl.poss
"Mike told Felipe to shut up."

91. B-quìi'lly bxuuhahz Gye'eihlly [ch-iia (Gye'eihlly) scweel]
Perf-persuade priest Mike irr-go (Mike) school
"The priest persuaded Mike to go to school."

If the object of the matrix clauses is a possessed DP with *–ni'*, however, the possessed DP cannot appear overtly in the embedded clause:

92. B-quìi'lly Gye'eihlly behts-ni' g-a'uh Ø bx:àady
Perf-persuade Mike brother-refl.poss irr-eat Ø grasshopper
"Mike persuaded his brother to eat grasshoppers."

93. * B-quìi'lly Gye'eihlly behts-ni g-a'uh' behts-ni' bx:àady
Perf-persuade Mike brother-refl.poss irr-eat brother-refl.poss grasshopper
"Mike persuaded his brother to eat grasshoppers."

94. R-e'ihpy Gye'eihlly behts-ni' g-a'uh Ø bx:àady
Hab-tell Mike brother-refl.poss irr-eat Ø grasshopper
"Mike told his brother to eat grasshoppers."

95. * R-e'ihpy Gye'eihlly behts-ni' g-a'uh behts-ni' bx:àady
Hab-tell Mike brother-refl.poss irr-eat brother-refl.poss grasshopper
"Mike told his brother to eat grasshoppers."

This is consistent with the fact that *–ni'* can't appear in the subject of an embedded clause: it needs to be in the same tensed clause as its antecedent.

If the null subject of the embedded clause were simply a phonologically silent version of the possessed matrix clause object, it would still fail to be locally bound, and (92) and (94) would be ungrammatical. The grammaticality of (92) and (94), then, shows that they must be syntactically distinct from (93) and (95).

Likewise, if the gapped position were simply a null pronoun coindexed with the matrix subject, we would expect an overt argument coreferenced with the matrix object to be able to appear in the gapped position. However, this proves not to be the case. Neither a lexical nor overt pronominal subject may appear in the embedded subject position:

96. *R-e'ihpy Gye'eihlly behts-ni'
hab-tell Mike brother-refl.poss

g-a'uh behts Gye'eihlly bx:àady
irr-eat brother-Mike grasshopper
"Mike told his brother to eat grasshoppers."

97. *R-e'ihpy Gye'eihlly behts-ni' g-a'uh-ëng bx:àady
hab-tell Mike brother-refl.poss irr-eat-3s.prox. grasshopper
"Mike told his brother to eat grasshoppers."

However, *behts Gye'eihlly* 'Mike's brother' would be licit (but optional) if it were also used as the object of the matrix clause:

98. R-e'ihpy Gye'eihlly behts Gye'eihlly g-a'uh (behts Gye'eihlly) bx:àady
Hab-tell Mike brother Mike irr-eat brother Mike grasshopper
"Mike told his brother to eat grasshoppers."

This shows that the Identical Antecedent requirement holds for control structures, and shows an anaphoric dependency between the matrix object and the gapped complement subject. The complement subject position is one from which overt A'-movement has been shown to be independently possible. Moreover, no independent null DP category can serve as a plausible filler for the gapped position. Hence, the gap must be a trace of A'-movement: an empty variable generated as the embedded clause subject raises to an operator position bound by the matrix object.

6.1.4. Zero anaphora and quantified arguments

Zero anaphora also obligatorily appear—and overt bound copies are obligatorily blocked--as subjects of complements clauses bound by quantified matrix subjects:

99. Yra'ta' zhyàa'p r-ralloh nsinnyi'cy Ø
Every girl hab-think neut-.be.smart Ø
"Every girl$_i$ thinks she$_i$ is smart."

100. Tèebag tu zhyàa'p -dya' r-ralloh nsinnyi'cy Ø
Neg who girl-neg hab-think neut-be.smart Ø
"No $girl_i$ thinks she_i is smart."

As previously shown for local binding relations, quantified arguments cannot appear as bound copies without incurring either a type clash or an unintended reading. A similar constraint holds in long-distance dependencies. Quantified matrix clause subjects cannot be copied in embedded clauses:

101. Yra'ta' zhyàa'p r-cààa'z g-ahcnèe' Ø Lia Paamm
Every girl hab-want irr-help Ø fem. Pam
"Every girl wants to help Pam."

102. * Yra'ta' zhyàa'p r-cààa'z g-ahcnèe' yra'ta' zhyàa'p Lia Paamm
every girl hab-want irr-help every girl fem. Pam
"Every girl wants to help Pam."

This constraint is motivated by the same factors as the constraint against locally bound QP copies. The intended reading of (101) can be expressed informally as follows:

103. Every x [girl(x) → x wants x to help Pam]

Thus, the subject of the embedded clause is interpreted as a variable bound by 'every girl'.

If the zero anaphor were simply a phonologically null QP, however, this reading would not be possible: the null copy would be interpreted as a second instance of quantification:

104. Every x [girl (x) → x wants [every x [girl (x)→ to help Pam]]]

This would wrongly force the reading that every girl wants it to be the case that every girl helps Pam.

If the zero anaphor were a trace left by overt movement of a null pronoun to an operator position associated with its antecedent, however, the right reading would result. Subject QPs in SLQZ generally appear in preverbal, rather than the typical postverbal, position. This suggests that they raise to CP for interpretive reasons. This would give the following semantic representation:

(fig 105 here)

Here, *pro* represents the null pronoun generated as the subject of the embedded clause. Thus, the trace of the pronoun is interpreted as a variable bound by the matrix subject QP. This configuration gives the intended reading.

To sum up, zero anaphora in SLQZ can only be accounted for as traces of overt movement: only a movement account of zero anaphora accounts for both their syntactic distribution and their interpretation with quantified antecedents.

6.2. Movement of overt bound copies

Now I return to the discussion of overt bound copies. I will argue for the following: Locally bound copies are base-generated as null variables, and spelled out as copies of their antecedents. Since SLQZ has no distinct reflexive pronouns, this 'copying' at spell-out serves to reflexive-mark the predicate.

Non-locally bound copies, like zero anaphora, are reflexes of overt A' movement. However, the contexts in which non-locally bound copies obligatorily occur are exactly those in which overt long-distance A'-movement is not licit. Hence, bound copies are resumptive elements left by subjacency-inducing A'movement: they allow these structures to be licit by filling otherwise improperly governed positions.

6.2.1. Why can't bound copies represent LF movement?

In the literature on binding, it has been widely argued that binding relations are mediated by LF movement of anaphoric elements (Chomsky 1986, Lebeaux 1983, among others). More recently, Hornstein (2001) argued that English anaphors are reflexes of overt movement. There is reason to believe that SLQZ bound copies have to be reflexes of PF, rather than LF, movement.

If bound copies are variables with no inherent referential force, they would have to be base-generated with no inherent morphological/phonological form in SLQZ. These anaphors would be merged with V, their antecedents merged later on, higher in the tree:

(figs 106-107 here)

But they need to get their phonological form by PF. Since the phonological form of anaphors in SLQZ is also their interpretive form, this means the anaphoric variable would be able to spell out its logical representation before LF. Under Minimalist assumptions that feature checking occurs via movement, such movement would have to take place by PF. Otherwise, SLQZ anaphors have to realize their interpretive features at PF, before checking them at LF.

Alternately, bound copies merge into the derivation with all their morphological features intact; if an appropriate antecedent is available at LF, the derivation converges; if not, it crashes:

(figs 108-109 here)

While consistent with Chomsky's (1992, 1995) Minimalist view of feature-checking, this would imply that bound copies appear at the beginning of the derivation bearing completely specified lexical features: this is clearly inconsistent with their semantic and syntactic status as bound variables. Moreover, this would force

the assumption that overt bound copies and zero anaphora are fundamentally different: zero anaphors are generated as null variables, and bound copies are generated with fully specified features. Given that both show identical semantic behavior (and, in some cases are even fully interchangeable), this is not a desirable assumption.

Since the most prudent assumption is that bound copies in SLQZ are, like zero anaphora, generated as null variables, it must be assumed that whatever movement licenses their interpretation must take place by spell-out—and thus, must be overt.

6.2.2. Local Copies Are Base Generated

Following Reinhart and Reuland (1993), I assume that local reflexivity is a feature of predicates, rather than arguments, and reflexive predicates are functions mapping a single argument to both argument positions. Since the parasitic relation between the bound copy and its antecedent is determined by the reflexive features of the predicate, the identity relation between the copies is established by spell-out, and both copies can be overtly realized.

22. Local bound copies are base-generated; non-locally bound copies are residues of overt movement

Reinhart and Reuland's account of local reflexivity, however, makes several requirements that are seemingly inconsistent with the SLQZ data: reflexive predicates must be either lexically reflective (that is, obligatorily reflexive) or reflexive-marked (that is, the reflexive argument must be a SELF anaphor: a DP with the person/number features of its antecedent.) SLQZ, however, lacks a distinct series of anaphoric pronouns (the only uniquely anaphoric pronouns are the reflexive-possessive marker *–ni* and the reciprocal pronoun *sa'ani'*).

I will assume that local bound copies serve the same function as SELF pronouns in SLQZ: like SELF pronouns, they are DPs, they lack independent reference (as seen from their bound variable status), and they show (obviously) the person/number features of their antecedents. Given that bound copies are often the only way to express local reflexivity in SLQZ (even in predicates that aren't inherently reflexive), this suggests that bound copies, too, can serve as potential reflexivizers.

6.2.3. Non-local bound copies and 'non-optimal' overt movement

As previously shown, non-locally bound copies are long-distance anaphors, and zero anaphora are be linked to their antecedents by overt A' movement. I will assume that non-local bound copies undergo the same type of A' movement as zero anaphora. The difference between bound copies and zero anaphora is in the context from which movement takes place: bound copies fill positions vacated by less-than-optimal movement. Typically, this movement involves subjacency violations. The derivation of (111) illustrates this point:

111. R-ralloh Gye'eihlly r-yu'lààa'z Lia Paamm Gye'eihlly
Hab-think Mike hab-like fem. Pam Mike
"Mike$_i$ thinks Pam likes him$_i$."

Long-distance focus fronting is disallowed from non-subjunctive complements (as seen in Section 6.1.2). Zero anaphora—and hence, overt movement--are permitted only in contexts in which long-distance (non-cyclic) A' movement is possible, but are blocked in contexts in which such movement is not possible. Conversely, the contexts in which overt bound copies obligatorily appear are those in which zero anaphora—and hence long-distance A'-movement—are disallowed.[8]

Example (111) is derived as follows: the bound copy *Gye'eihlly* 'Mike' in the complement clause enters the derivation as a phonologically null variable. From the complement clause, it must raise directly to its licensing position in the matrix clause (that is, it must raise directly into an operator position bound by its antecedent). In doing so, however, the null argument that will appear as the bound copy (*x* in the derivation below) violates Subjacency by crossing a potential A' landing position in CP:

112.
[TP R-ralloh Gye'eihlly [OpP x [CP [TP r-yu'lààa'z Lia Paamm t(x)]]

Hence, a resumptive element must appear in the object position as a repair strategy to correct the subjacency violation. The trace of the fronted variable is realized as a copy of its antecedent:

Overt bound copies, then, serve the same function as resumptive pronouns: they surface to fill positions that aren't properly governed by movement:

113. ?This is the guy$_i$ that you couldn't remember which girl went out with him$_i$.

Further evidence that bound copies represent resumptive pronouns comes from their bound variable status in adjunct clauses:

114. B-dìi'b Gye'eihlly tra'ast chih w-luahazh b-èèi'ny Gye'eihlly
Perf-wash Mike dishes when perf-finish perf-do Mike

x:chi'ih zi'cy caahgza' Li'eb
dinner likewise Felipe
"Mike washed the dishes after eating dinner and so did Felipe." (Felipe washed the dishes after he (Felipe) ate dinner)

The subject c-commands its copy, but the copy is in a position from which A'-movement is usually disallowed. Wh-movement cannot occur out of adjunct clauses in SLQZ:

115. *Tu b-dìi'b Gye'eihlly tra'ast chih
who perf-wash Mike dishes when

w-luhahazh g-uhcnèe' Gye'eihlly t ?
perf-finish perf-help Mike?
"Who did Mike wash the dishes after helping?"

The bound copy in the adjunct clause is syntactically and semantically dependent on its antecedent (it must be c-commanded by the antecedent and interpreted as a bound variable), yet it is in a position from which A' movement is blocked.

Thus, bound copies surface obligatorily in positions from which long-distance A' movement is disallowed: in indicative clausal complements, and in adjunct clauses. Movement, however, must nevertheless be construed in these constructions: if non-local bound copies were base-generated as independent R-expressions, this would suggest the non-operation of Principle C (previously shown to be robustly operational in SLQZ), and the bound variable status of these copies would be unexplained

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[1] This pattern was described in detail in Munro 1994. Some of the grammaticality judgments reported in this earlier work differ from those found here.

[2] SLQZ pronouns are also marked for proximity (3rd person pronouns may be marked as either proximate or distal) or level of formality (there are five levels of address used for 2nd and 3rd person pronouns: animal, informal, respectful, formal, and reverential). SLQZ pronouns are not marked for gender.

[3] See Munro (1996) for the uses of proximate and distal forms in narrative.

[4] Bare nouns in SLQZ may be interpreted as singular or plural, definite or indefinite, depending on context. I will assume that bare nouns are DPs with silent heads, and these DPs are treated as entities.

[5] Focus and wh-movement in SLQZ are not always mutually exclusive, as has been claimed for other languages with focus movement, and thus don't target the same A' positions (Lee 2001). This is consistent with the fact that they don't show parallel movement patterns.

[6] See Lee 1999 for evidence for obligatory syntactic tense in SLQZ

[7] *-Ni'* cannot take a pronoun as an antecedent. I leave the reasons for this for future research

[8] Wh-movement is possible, however, out of embedded indicative clauses:

Tu r-ralloh Gye'eihlly t r-yu'lààa'z (t) Lia Paamm (t)
Who hab-think Mike hab-like fem. Pam
"Who does Mike think Pam likes? / Who does Mike think likes Pam?"

The fact that long-distance focus movement is not possible shows that the two kinds of movement are not identical; for whatever reason, focus movement cannot be cyclic in SLQZ.

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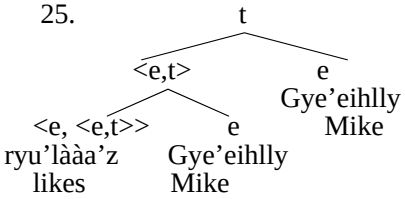

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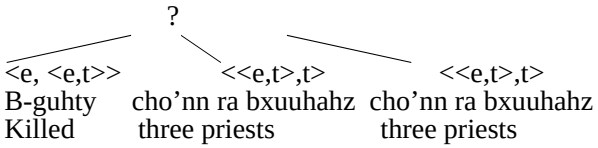
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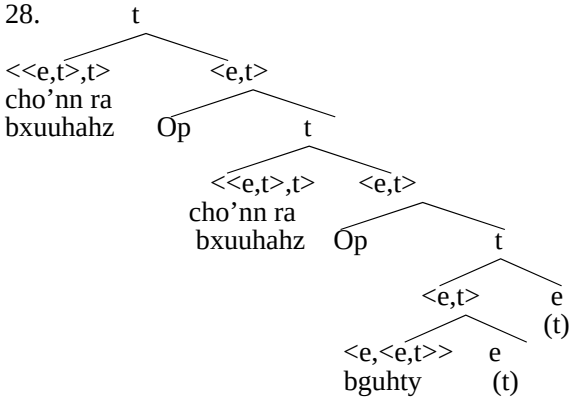
B-guhty cho’nn ra bxuuhahz cho’nn ra bxuuhahz
Killed three priests three priests

28.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bxuuhahz
<e,t>
Op
t
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cho'nn ra
bxuuhahz
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bguhty
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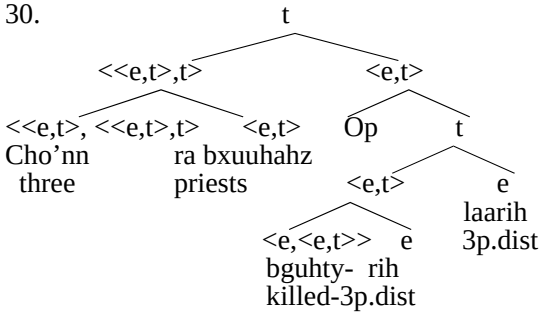
30.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Op
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Cho'nn
three
ra bxuuhahz
priests
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laarih
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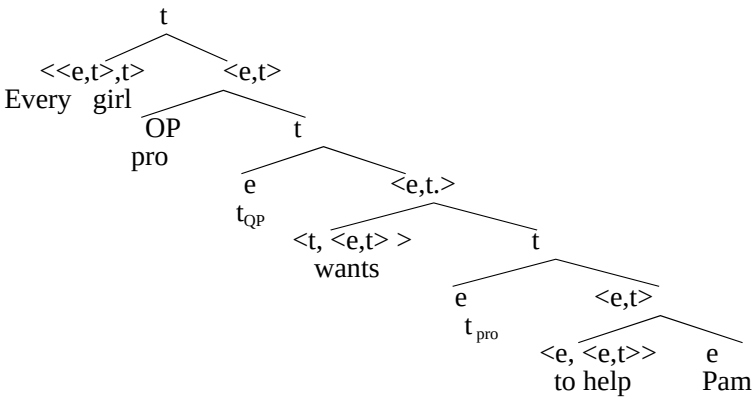
bguhty-
rih
killed-3p.dist

105.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Every girl
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pro
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<e,t.>
t_{QP}
<t, <e,t> >
t
wants
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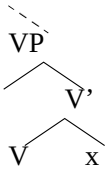
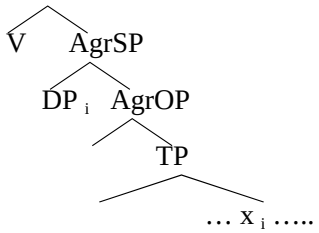
<e,t>
t_{pro}
<e, <e,t>>
e
to help
Pam

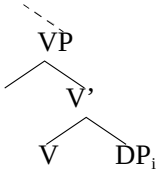
106.



107. TP



108.



109.