Hierarchies, Subjects, and the Lack Thereof in Imbabura Quichua Subordinate Clauses

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1 Introduction

One way to simplify grammatical descriptions and comparisons is to set up a hierarchy of properties associated with the constructions under analysis. Rather than specifying piecemeal the set of behaviors associated with constructions X and Y, the right hierarchy allows a linguist simply to say that construction X has behavior N *and everything below it* on the hierarchy, while construction Y has behavior N+2 *and everything below it*. These hierarchies can be implicational tendencies that describe cross-linguistic generalizations (for example, markedness hierarchies such as /t/ $<$ /p/ $<$ /k/, by which languages that have the phoneme /k/ will also have /p/ and /t/; Maddieson 1984), or they can be a language-specific hierarchy that simplifies description of a set of structures. This paper deals with two hierarchies of the second type. Specifically, I argue that two hierarchies that have been proposed to account for the behavior of non-canonical subjects in Imbabura Quichua do not uniformly hold true in the face of other data.

Imbabura Quichua (IQ) is a Quechua language spoken by perhaps a hundred thousand people in the Imbabura province of the Ecuadorean Andes.[1] Of interest in this investigation are its multiple types of non-canonical subjects. Non-canonical subjects are arguments that behave similarly to subjects in some ways — e.g., in imperative constructions, or as antecedents for reflexive pronouns — but not all. Usually non-canonical subjects are distinct from canonical subjects at least in their morphological properties, taking different case-marking or governing different patterns of verb agreement, and often they diverge in some other syntactic properties as well (Onishi 2001). In a language like IQ, which has multiple types of non-canonical subjects, a hierarchical arrangment of subjecthood properties become extremely useful, because the right hierarchy allows the linguist to describe much more concisely the behavior of each non-canonical subject in a principled way. The linguist can simply refer to a subset of properties on the hierarchy, rather than giving a piecemeal listing of which behavior each argument type does or does not exhibit.

The first hierarchical description of non-canonical subjects discussed in this paper is proposed by Onishi (2001) and Hermon (2001). It describes which types of syntactic behaviors non-canonical subjects are most likely to display. A summary of Hermon's proposal is given below in (1). Briefly, she proposes that an argument which displays behaviors later on the list will also display all the behaviors earlier on the list. For example, an argument that can be the target of coreferential EQUI deletion (step (b)) will also show a ban on WH-movement (step (a)), but not necessarily vice versa, and arguments that are morphologically coded as subjects (step (c)) will exhibit all the other behaviors listed in steps (a)-(b).

[1] The exact amount varies: Lewis (2009) cites 300,000 from a 1977 SIL survey, while Gómez-Rendón (2007) points out that the entire population of the Imbabura province was barely 250,000 in 1982; he proposes a more conservative estimate of 150,000 speakers.

(1) a. switch-reference controller / ban on WH-movement / subject-to-object raising / demotion in passivization
b. Target of switch-reference deletion / coreferential EQUI deletion / target of subject-to-subject raising
c. Morphological coding [here, nominative case and governing subject-verb agreement]

The second hierarchy, also proposed by Hermon (2001), accounts for the varying behaviors of different types of non-canonical subjects in Imbabura Quichua by positing a hierarchical progression of less subject-like arguments to more subject-like arguments. Specifically, she shows that lexical experiencer subjects are less subject-like than desiderative experiencer subjects, which are themselves less subject-like than canonical subjects. This second hierarchy is shown below in (2).

(2) canonical subject > desiderative > experiencer > non-subject

These two hierarchies were devised to fit together closely. Non-subjects exhibit none of the properties on Hierarchy (1). Experiencer non-canonical subjects exhibit only the subject properties on step (a), desiderative subjects exhibit those properties of both step (a) and step (b), and canonical subjects exhibit the behaviors at all levels.

In this paper, I make two claims. First, I show that IQ has a third type of non-canonical subject that has not been discussed as such in any previous work: The demoted subject of a causativized verb. Next, I argue that when the caused subjects are included in IQ's inventory of non-canonical subjects, the close-fitting relation between Hierarchies (1) and (2) falls apart. This second claim is supported by further evidence from my own fieldwork that provides a slightly more nuanced look at certain properties of IQ introduced by Hermon (2001).

This paper is organized as follows. In §2 I introduce the currently accepted two types of non-canonical subjects in IQ. In §3 I describe IQ's switch-reference system, whose treatment of non-canonical subjects is a property that appears on two steps of Hierarchy (1). This description will include certain subtleties of the switch-reference system that Hermon does not discuss — specifically, the fact that there are two different switch-reference systems that do not behave identically, and the possibilities of using the systems to encode **non**-subject-like behaviors as well as subject-like behaviors. In §4 I propose the third type of non-canonical subject — the caused subject — that has as yet not been analyzed as any kind of subject in IQ, and show how the switch-reference system treats it as a subject-like argument. In §5 I show how adding the caused subject to the existing analysis causes the relationship between Hierarchies (1) and (2) to break down, thus robbing it of much of its explanatory power, before concluding in §6.[2]

[2] The following abbreviations are used: 1SG=first person singular subject agreement; 1.OBJ=first person object agreement; 2SG=second person singular subject agreement; 3=third-person subject agreement; ACC=accusative case; ADV=adverbial marker; ADV.DS=adverbial different subject marker; ADV.SS=adverbial same subject marker; CAUS=causative marker; INF=infinitival marker; DAT=dative case; DESID=desiderative marker; DIM=diminutive marker; DIST=distributive marker; INTER=interrogative marker; LIM=limitative marker; LOC=locative case; NEG=negative suffix; NOM=nominative case; NMLZ=nominalizer; POSS=possessive marker; PROG=progressive aspect; SUBJ.DS=subjunctive different subject marker; SUBJ.SS=subjunctive same subject marker; TOP=topic marker; VAL=validator

2 Non-canonical Subjects in IQ

IQ is generally analyzed as having two types of non-canonical subjects: **Desiderative experiencers** and **lexical experiencers** (e.g., Cole 1982; Cole and Hermon 1981; Hermon 2001; Willgohs and Farrell 2009). Desiderative experiencers (which I am calling here "desiderative subjects") occur with verbs that have been marked with the desiderative suffix *-naya*, corresponding to the canonical subject of those same verb roots that lack that suffix. Lexical experiencers (which I am calling here "experiencer subjects") occur as the single argument to verbs that express certain physical or emotional sensations, such as *nana-* 'hurt,' *rupa-* 'be hot,' *chiri-* 'be cold,' *yarxa-* 'be hungry,' and sometimes *muna-* 'want.'[3]

These non-canonical subjects are easily distinguished from canonical subjects on the basis of three morphological properties: case-marking, subject-verb agreement, and object-agreement. Whereas canonical subjects receive a null nominative case and control subject-verb agreement, as shown below in (3), non-canonical subjects uniformly appear with the accusative suffix *-ta* and appear with default third-person verb agreement. These properties are shown below in (4) for experiencer subjects and (5) for desiderative subjects.[4]

(3) a. ***Juan-∅*** *trabaja-xu-**n***
Juan-NOM work-PROG-**3**
'Juan is working.'

b. ***Nyuka-∅*** *chay-ta villa-rka-**ni** Marya-man-ka*
I-NOM that-ACC tell-PAST-**1sg** Marya-DAT-TOP
'I told that to Maria.' (Cole 1982)

(4) a. ***Nyuka maki-ta*** *nana-xu-**n***
My hand-ACC hurt-PROG-**3**
'My hand hurts.'

b. ***Kan-ta*** *rupa-xu-**n***
you-ACC be.hot-PROG-**3**
'You are hot.'

c. ***Nyukanchi-ta*** *chiri-xu-**n***
we-ACC be.cold-PROG-**3**
'We are cold.'

d. ***Nyuka-ta*** *yarxa-xu-**n***
I-ACC be.hungry-PROG-3
'I am hungry.' (2010-03mar-18-MXC-CPC)

(5) a. ***Juzi-ta*** *punyu-naya-**n***
Jose-ACC sleep-DESID-**3**

[3] The verb *muna-* is slightly different from the other lexical experiencer predicates in that the subject seems to be able to vary freely between a canonical nominative subject that governs verb agreement and a non-canonical accusative experiencer subject that cannot govern verb agreement. Thus, it is perfectly possible to say either *nyuka munani* 'I.NOM want.1SG' or *nyuka-ta munan* 'I.ACC want.3.'

[4] Citations that do not reference published works indicate data taken from fieldwork between August 2009 and May 2010.

'Jose wants to sleep.'

b. ***Nyuka-ta****-ka mishki-ta miku-naya-rka-∅*
I-ACC candy-ACC eat-DESID-PAST-**3**
'I wanted (to eat) candy.'

c. ***Kan-ta****-ka ufya-naya-**n**-chu*
you-ACC-TOP drink-DESID-**3**-INTER
'Do you want to drink?' (Cole 1982)

d. ***Nyukanchi-ta*** *xatun yaku-ta riku-naya-**n***
we-ACC big lake-ACC see-DESID-**3**
'We want to see the ocean.' (2010-4apr-01-MXC-CPC)

The third morphological property that distinguishes non-canonical from canonical subjects — that of compatibility with object agreement morphology — is not always observable. IQ has lost the full paradigm of object-agreement markers or portmanteau subject-on-object morphemes that are still present in other Quechua languages (Hermon 2001; Weber 1989). However, it does still retain an optional first-person object agreement suffix *-wa*. The examples in (6) below show how this suffix can mark agreement with a first-person direct (6a-c) or indirect (6d) object, but not with a subject (6e). Nevertheless, it is perfectly compatible with IQ non-canonical subjects, both desiderative (7) and experiencer (8).

(6) a. *Kan-∅ hayta-**wa**-ngi*
you-NOM kick-**1.OBJ**-2.SG
'You kick me.'[5] (2009-09sep-22-ACO-RWK-01-wl)

b. *Pay-kuna-∅ wakta-**wa**-naxu-n (nyukanchi-ta)*
he-PL-NOM hit-**1.OBJ**-DIST-3 (us-ACC)
'They hit us.' (2009-11nov-24-MC-CPC-01)

c. *(Nyuka-∅ uchila ka-xpi) nyuka tayta-kuna ku-na-**wa**-xu-rka-∅ nyuka awla-man*
(I-NOM little be-ADV.DS) my father-PL give-DIST-**1.OBJ**-PAST-3 my grandmother-DAT
'(When I was a baby) my parents gave me to my grandmother [e.g., to hold].' (2009-11nov-24-MC-CPC-01)

d. *Kan-pa tayta kan-∅ uchila ka-xpi nyuka-man ku-**wa**-rka-∅*
you-POSS father you-NOM little be-ADV.DS me-DAT give-**1.OBJ**-PAST-3
'When you were a baby your father gave you to me [e.g., to hold].' (2009-11nov-24-MC-CPC-01)

e. * *Nyuka-∅-ka kan-ta maka-**wa**-rka-ngi/ni*
I-NOM-TOP you-ACC hit-**1.OBJ**-PAST-2.SG/1.SG
Intended: 'I hit you.' (Hermon 2001)

(7) a. *Nyuka-ta-ka punyu-naya-**wa**-rka-∅*
I-ACC-TOP sleep-DESID-**1.OBJ**-past-3

[5] Note that IQ can freely drop pronouns — both subject and object.

'I wanted to sleep.'

b. *Miku-naya-**wa**-n-mi*
eat-DESID-**1.OBJ**-3-VAL
'I want to eat.'

(8) a. *Nyuka-ta-ka chiri-**wa**-rka-∅-mi*
I-ACC-TOP be.cold-**1.OBJ**-past-3-val
'I was cold.' (Hermon 2001)

3 Switch-reference

3.1 With Canonical Subjects

A more complete discussion of all the syntactic subjecthood behaviors exhibited by desiderative and experiencer subjects can be found in Cole (1982) and Hermon (2001). The purpose of this section is to summarize the behavior of the switch-reference system in IQ subordinate clauses, because the evidence from this particular subjecthood diagnostic is instrumental in separating the first two steps in Hierarchy (1), as well as in separating desiderative and experiencer subjects in Hierarchy (2).

IQ's switch-reference system is a way of marking certain subordinate clauses with one of two suffixes on the subordinate clause verb. One suffix is used when the subjects of the main and subordinate clauses are coreferential, while the other suffix is used when the two subjects are not coreferential. I will be calling the first suffix the SS, or same-subject, marker, and the second suffix the DS, or different-subject, marker.

Two types of subordinate clauses employ this switch-reference system. The first is the adverbial clause, which is a subordinate adjunct clause indicating the manner of an action, a temporal setting, or the condition under which the main clause holds. It usually corresponds to English subordinate clauses introduced by *while, when, having done* or *since*. The second type of subordinate clause is what I shall call the subjunctive clause. It can be either the complement clause of verbs like *muna-* 'want' and *tapu-* 'ask,' or a purposive adjunct clause, corresponding to English clauses introduced by expressions such as *in order to, so that*.[6] The form of SS and DS suffixes for these two clauses is shown below in (9).

(9)

	SS	DS
ADVERBIAL	*-shpa*	*-xpi*
SUBJUNCTIVE	*-ngapax*	*-chun*

Examples of the SS/DS pattern for adverbials is shown in (10), while the pattern for subjunctives is shown in (11). In all examples the subordinate clause has been bracketed, with an underscore indicating the position of the deleted subject.

[6] Since only a small number of verbs can introduce a subjunctive complement clause, I will be examining subjunctive patterns of SS- or DS-marking in the context of a purposive adjunct clause, which by its nature as an adjunct can occur in a much more varied set of sentences. It should therefore be remembered that the pattern described here for subjunctive clauses might be restricted only to their use in adjunct purposives, and may not extend to their use as complement clauses.

(10) a. *[__ Yapu-chi-**shpa**-ka] kay xiwa-kuna ima akzha-na ka-ngi*
[plow-CAUSE-**ADV.SS**-TOP] that grass-PL what sort-INF be-2sg
'After you've plowed, you have to sort through whatever grasses are there.' (How to run a farm, line 14, 2009-11nov-10-MXC-CPC-1)

b. *[__ Kashna-zha tuku-**xpi**-ka], nya alpa-gu-ta kimi-chi-na ka-ngi*
[like.this-LIM become-**ADV.DS**-TOP], already land-DIM-ACC pile-CAUSE-INF be-2sg
'When it (i.e., the corn plant) has become about this big, you have to pile the dirt up (i.e., around the stalk).' (How to run a farm, lines 39-40, 2009-11nov-10-MXC-CPC-1)

(11) a. *Nyuka-∅ uchila ka-shpa ri-rka-ni [__ kay zambu-ta apamu-**ngapax**]*
I-NOM little be-ADV.SS go-PAST-1sg [that pumpkin-ACC fetch-**SUBJ.SS**]
'When I was little, I went to fetch a pumpkin.' (Mariana loses her pumpkin, line 1, 2009-09sep-29-MXC-CPC-1)

b. *Yaku-ta chura-na ka-ngi [atalpa-∅ ufia-**chun**]*
water-ACC put-INF be-2sg [chicken-NOM drink-**SUBJ.DS**]
'You have to put out water so the chicken drinks.' (2009-11nov-10-MXC-CPC)

In (10a) the subject of the subordinate clause, 'you,' is the same as the subject of the main clause. The person doing the plowing is the same person who is doing the sorting of the grasses. For this reason, the subordinate verb is marked with the adverbial SS suffix *-shpa*. By contrast, in (10b) the subjects are different: It is the corn which has grown to a certain size while it is 'you' who must pile dirt up around the stalks. Thus, the subordinate verb is marked with *-xpi*, the adverbial DS suffix. In (11a) the patterns are similar: The subject of the main clause 'I went' is first person singular, the same as the subject of the purpose clause 'to fetch a pumpkin.' Thus the subordinate verb *apamu-*, 'fetch,' is marked with the subjunctive SS morpheme *-ngapax*.[7] In (11b) the person putting out the water, 'you,' is not the person who will drink the water — that honor goes to the chickens. Thus, the subordinate verb *ufia-*, 'drink,' receives the subjunctive DS suffix *-chun*. Any other combination of markers would be ungrammatical. The subordinate verb in (10a) cannot be marked with *-xpi*, and in (10b) it cannot be marked with *-shpa*. In (11a) the subordinate verb would be ungrammatical if it were marked with *-chun*, and likewise in (10b) if it were marked with *-ngapax*. When only canonical subjects are involved, there is no choice in the use of the switch-reference suffixes.

3.2 With Non-canonical Subjects

The point of interest of IQ's switch-reference system lies in its use as a subjecthood diagnostic. SS-marking is licensed only when the subjects of the main and subordinate clauses are coreferential. Therefore, if sentences with a controller in the main clause and a coreferential target (usually

[7] Note that in addition to a pumpkin-fetching subjunctive clause, there is another, sentence-initial adverbial clause about being little, whose subject is again the first-person singular subject of the main clause. Thus the clause *nyuka uchila kashpa* 'when I was little,' is marked with the SS adverbial *-shpa* on the verb 'be': *ka-shpa*.

deleted) in the subordinate clause allows SS-marking, then both of those arguments can be analyzed as subjects in the syntax. In this way, a non-canonical subject can be analyzed as subject-like to the extent that it is compatible with SS-marking, and as non-subject-like to the extent that it is compatible with DS-marking.

In adverbial or subordinate clauses, there are two possible positions for a non-canonical subject to be evaluated:

1. The non-canonical subject may be in the main clause, where it is evaluated as a possible **controller** for a coreferent canonical subject in the subordinate clause.

2. The non-canonical subject may be in the subordinate clause, where it is evaluated as a possible **target** for the coreferent canonical subject in the main clause.

According to Hierarchy (1), repeated below for clarity, it is "easier" for a main-clause **controller** to count as a subject and trigger SS-marking under identity with the deleted target in the subordinate clause than vice-versa. This is represented in the hierarchy by putting the subjecthood property of being a switch-reference controller on the lowest step (a), while being a target is on the middle step (b).

(1) a. **Switch-reference controller /** ban on WH-movement **/** subject-to-object raising **/** passivization
b. **Target of switch-reference deletion /** coreferential EQUI deletion **/** target of subject-to-subject raising
c. Morphological coding [here, nominative case and governing subject-verb agreement]

Hermon (2001) observes that, although both experiencer and desiderative subjects can license the use of the SS-marker when they are switch-reference controllers, they cannot always be switch-reference targets. The sentences in (12) demonstrate that both desiderative (12a) and experiencer (12b-c) subjects are compatible with the use of the adverbial SS-marker *-shpa*, while the sentences in (13) show that the same is true of desiderative (13a) and experiencer (13b) subjects with the subjunctive SS-marker *-ngapax*. Importantly, in these sentences the non-canonical subjects are all switch-reference **controllers** in the main clause.[8]

(12) a. *[__Ashtaka-ta punzhata chura-**shpa/xpi**], nyuka-ta punyu-naya-n*
a.lot-ACC today do-**ADV.SS/ADV.DS**, I-ACC sleep-DESID-3
'Because I did so much today, I want to sleep.' (2010-03mar-11-MXC-CPC)
b. *[__Ashtaka-ta punzhata chura-**shpa/xpi**-ka], nyuka-ta yarxa-xu-n*
a.lot-ACC today do-**ADV.SS/ADV.DS**-TOP, I-ACC hungry-PROG-3
'Because I did so much today, I'm hungry.' (2010-04apr-01-MXC-CPC)
c. *[__ Yaku-pi ka-**shpa**-ka], chiri-wa-rka-mi*
[water-LOC be-**ADV.SS**-TOP], be.cold-1.OBJ-PAST-VAL
'While in the water, I was cold.' (Hermon 2001)

(13) a. *Nyuka-ta punyu-naya-n [__ musku-**ngapax/*chun**]*
I-ACC sleep-DESID-3 [dream-**SUBJ.SS/*SUBJ.DS**]
'I want to sleep in order to dream.' (2010-04apr-29-MXC-CPC)

[8] For clarity, the deleted subordinate clause argument has been represented with an underscore.

b. *Nyuka-ta nana-xu-n [__ ali tuku-**ngapax/*chun**]*
I-ACC hurt-PROG-3 [good become-**SUBJ.SS/*SUBJ.DS**]
'I hurt [i.e., suffer in the religious sense] in order to become good.' (2010-05may-04-ACO-EEW)

Note that, although both SS *-shpa* and DS *-xpi* are permissible for desiderative (12a) and experiencer (12b-c) subject controllers in adverbial clauses, only the SS-marker *-ngapax* is permissible for desiderative (13a) or experiencer (13b) controller subjects in subjunctive clauses. The DS maker *-chun* is impossible in these sentences.[9]

When these same non-canonical subjects are switch-reference **targets** in the adverbial clause, the DS-marker *-xpi* is permissible in all cases, but only desiderative subjects allow the use of the SS-marker *-shpa*.[10]

(14) a. *[__ Miku-naya-**shpa/xpi**],* *papa-ta* *randi-rka-ni*
[eat-DESID-**ADV.SS/ADV.DS**], potato-ACC buy-PAST-1SG
'Wanting to eat, I bought a potato.' (2010-04apr-01-MXC-CPC)

b. *[__ Yarxa-***shpa/xpi**],* *papa-ta* *randi-rka-ni*
[hungry-***ADV.SS/ADV.DS**], potato-ACC buy-PAST-1SG
'Being hungry, I bought a potato.' (2010-04apr-01-MXC-CPC)

The situation with non-canonical subject targets in subjunctive clauses is slightly muddier. On the one hand, it seems straightforward that deleted desiderative subjects in subjunctive clauses allow the use of the SS-marker *ngapax* (15a-b) as well as the DS-marker *-chun* — exactly parallel to their behavior in adverbial clauses.

(15) a. *[__ Punyu-naya-**ngapax**] pastizha-ta ufia-rka-ni*
[sleep-DESID-**SUBJ.SS**] pill-ACC drink-PAST-1SG
'In order to desire to sleep, I took a pill.' (Hermon 2001)

b. *Nyuka-∅ na miku-xu-ni-chu, [__ ashtaka-ta chishi-pi*
I-NOM not eat-PROG-1SG-NEG, [__ a.lot-ACC evening-LOC
*miku-naya-**ngapax/chun**]*
eat-DESID-**SUBJ.SS/SUBJ.DS**]
'I'm not eating today so that I'll want to eat a lot later this evening.' (2010-05may-04-ACO-DJM)

[9] It should further be noted that the sentences in (13) are slightly unnatural sounding. This is probably due to the fact that there are very few circumstances in which a person can undergo a physiological experience with sufficient agency to justify the use of the following purposive clause.

[10] The examples in (14) contain no overt subjects whatsoever — in the main clause because they have simply been deleted, as often happens in IQ, and in the subordinate clause because they are the intended targets of switch-reference deletion. However, the presence of the non-canonical subjects in the subordinate clauses — even after deletion — can still be deduced from the verbs in the subordinate clauses. In (14a) the subordinate clause verb *miku-naya-shpa* 'want to eat' has the desiderative suffix *-naya*, indicating a desiderative subject, while in (14b) the subordinate clause verb *yarxa-*shpa/xpi* 'be hungry' is one of those verbs of physiological experience which lexically requires an experiencer subject.

By contrast, it seems that the possibility of using the SS-marker *-ngapax* with a deleted experiencer subject in the subordinate clause varies by speaker or by sentential context. Hermon (2001) gives the example in (16a) as evidence that it is impossible to use *-ngapax* with deleted experiencer subjects in subordinate subjunctive clauses. However, the elicited example in (16b) is a counterexample, where DS *-chun* is impossible, and only SS *-ngapax* is allowed.

(16) a. * *[Ama __ chiri-**ngapax**]* *nina-ta* *rura-rka-ni*
[not be.cold-**SUBJ.SS**] fire-ACC make-PAST-1SG
Intended: 'In order not to be cold, I made a fire.'

b. *Nyuka-Ø bayta-ta* *chura-xu-ni* *[__ rupa-**ngapax/*chun**]*
I-NOM shawl-ACC put.on-PROG-1SG [be.hot-**SUBJ.SS/*SUBJ.DS**]
'I put on my shawl in order to be hot.' (2010-05may-04-ACO-EEW)

3.3 Summary So Far

On the basis of these structures (desiderative and experiencer subjects, and the switch-reference system for adverbial and subjunctive clauses) it seems that IQ is entirely consistent with Hierarchies (1) and (2). As the table in (17) shows, the only situation when non-canonical subjects do not act like canonical subjects — i.e., do not allow the SS-marker *-shpa* or *-ngapax* even when they are coreferent with the subject in the other clause — is when they are the target of switch-reference deletion in the subordinate clause. Being a grammatical switch-reference target is at step (b) on Hierarchy (1), higher than the property of being a switch-reference controller in the main clause, and thus it is to be expected that SS-marking would be more restricted for switch-reference targets than for controllers. Further, the only non-canonical subject which does not allow the use of the SS-marker *-shpa* or *-ngapax* when it is the switch-reference target is the experiencer subject, which is lower on Hierarchy (2) than the desiderative subject.

(17) Possibility of using SS- and DS-marker

	Main-clause (i.e., controller)		Subordinate-clause (i.e., target)	
	Adverbial	Subjunctive	Adverbial	Subjunctive
DESIDERATIVE	SS/DS	SS only	SS/DS	SS/DS
EXPERIENCER	SS/DS	SS only	DS only	Unclear

4 Caused Subjects

In this section I introduce the third type of non-canonical subject: Caused subjects, which appear when the causative suffix *-chi* is added to the main verb. Cross-linguistically, the causative is a construction that adds a new argument to a clause in order to represent a notional causer of some action. This notional causer becomes a subject, while the original subject is demoted to some oblique or peripheral status (Palmer 1994). In IQ this added notional causer behaves like a canonical subject in (almost) every way, receiving nominative case and governing verb agreement. It is the demoted original subject, which I call the caused subject, that I propose to analyze as IQ's third type of non-canonical subject.

4.1 Properties of the Caused Subject

Morphologically, the caused subject behaves like a direct object. Examples (18-19) below show representative non-causative/causative pairs, while example (20) shows a canonical direct object for comparison.

(18) a. ***Chay alku-∅*** *kalpa-xu-n*
That dog-NOM run-PROG-3
'That dog is running.'

b. *Chay xari-∅* *kalpa-chi-xu-n* ***alku-ta***
that man-NOM run-CAUS-PROG-3 **dog-ACC**
'That man is making the dog run.' (2009-09sep-17-ACO-LDM)

(19) a. ***Nyuka-∅*** *punyu-ni*
I-NOM sleep-1SG
'I sleep.'

b. *Kikin-∅* ***nyuka-ta*** *punyu-chi-wa-ngi*
You-NOM **me-ACC** sleep-CAUS-1.OBJ-2SG
'You put me to sleep.' (2010-04apr-15-MXC-CPC)

(20) *Kan-∅* *nyuka-ta maka-wa-rka-ngi*
You-NOM me-ACC hit-1OBJ-PAST-2SG
'You hit me.' (Hermon 2001)

As (18b) and (19b) show, the caused subject receives the accusative case marker *-ta*, and as (19b) shows, it can also be cross-referenced on the verb with the first person object marker *-wa*. These same properties can be seen for the canonical direct object in (20), and contrasted with the behavior of the notional causers in (18b) and (19b), which receive null nominative case and govern subject-verb agreement exactly like canonical subjects (e.g., (3), (18a), (19a). In this way, the caused subject is very similar to a direct object, and indeed the demoted subject of Quechua causatives is often analyzed as a direct object (e.g., Cole 1982; Davies and Rosen 1988).

In one striking way, however, the caused subject also behaves like a canonical subject: When the caused subject is coreferent with the canonical subject of another clause, IQ allows the use of the adverbial SS-marker *-shpa* both when the caused subject is the switch-reference controller in the main clause (21), and also when it is the target in the subordinate clause. Sentences with this second configuration are shown in (22)-(25). The (a)-continuations show main clauses whose canonical subject is coreferent with the **caused** subject of the preceding subordinate clause. The (b)-continuations show main clauses whose canonical subject is coreferent with the notional **causer**, or similarly canonical subject, of the preceding subordinate clause.

(21) *[Wawa$_i$ ashtaka-ta punzha-ta waka-**shpa/xpi**],* *nyuka **pay$_i$-ta*** *punyu-chi-ni*
baby$_i$ a.lot-ADV day-ADV cry-**ADV.SS/ADV.DS**, I **him$_i$-ACC** sleep-CAUS-1.sg
'Since the baby cried a lot during the day, I'm putting him (=causing him) to sleep.' (2010-04apr-01-MXC-CPC)

(22) *[Alku-∅* ***misi-ta*** *wanyu-chi-**shpa/xpi**]* ...
[dog-NOM **cat-ACC** die-CAUS-**ADV.SS/ADV.DS**] ...

'Since the dog killed the cat (=caused to die) . . . '

a. . . . *kunan-ka misi ismu-xu-n*
. . . today-TOP cat rot-PROG-3
'. . . today the cat is rotting'

b. . . . *pay-∅ nali alku*
. . . he-NOM bad dog
'. . . he is a bad dog.' (2010-04apr-08-MXC-CPC)

(23) *[Nyuka-∅* ***wawa-ta*** *punyu-chi-**shpa/xpi**-ka]* . . .
[I-NOM **baby-ACC** sleep-CAUS-**ADV.SS/ADV.DS**-TOP] . . .
'Since I made the baby sleep . . . '

a. . . . *punzha-pi pay-∅ kushi ka-n*
. . . day-LOC he-NOM happy be-3
'. . . in the afternoon he is cheerful.'

b. . . . *punzha-pi nyuka-∅ kushi ka-ni*
. . . day-LOC I-NOM happy be-1SG
'. . . in the afternoon I am cheerful.' (2010-04apr-08-MXC-CPC)

(24) *[Nyuka-∅* ***wagra-kuna-ta*** *miku-chi-**shpa/xpi**-ka]* . . .
[I-NOM **cow-PL-ACC** eat-CAUS-**ADV.SS/ADV.DS**-TOP] . . .
'Since I fed the cows (=caused them to eat) . . . '

a. . . . *pay-kuna-∅ ali-mi ka-n*
. . . he-NOM-PL good-VAL be-3
'. . . they are good (=healthy).' (2010-04apr-08-MXC-CPC)

(25) *[Kikin-∅* ***nyuka-ta*** *runa shimi-ta yacha-chi-**shpa/xpi**-ka]* . . .
[You-NOM **me-ACC** person language-ACC know-CAUS-**ADV.SS/ADV.DS**-TOP] . . .
'Since you taught me (=caused me to know) how to speak Quichua[11] . . . '

a. . . . *chay-mi ali rima-y-ta usha-ni*
. . . that-VAL good speak-NMLZ-ACC can-1SG
'. . . now I can speak well.'

b. . . . *kikin-∅ kushi ka-ngi*
. . . you-NOM happy be-2SG
'. . . you are happy.' (2010-04apr-08-MXC-CPC)

As the (a)-continuations of (22-25) show, it is possible to use either the SS-marker *-shpa* or the DS-marker *-xpi* on the subordinate verb. The compatibility of the caused subject with the use of the DS-marker *-xpi* is to be expected, given the other object-like properties of the caused subject. It is their compatibility with the use of SS *-shpa* that forms the basis for my claim that caused subjects are a type of non-canonical subject. Indeed, this claim is not entirely inconsistent with previous analyses. Both Cole (1982) and Davies and Rosen (1988) analyze IQ causatives as a monoclausal

[11] In addition to *kichwa* 'Quichua,' the language can also be referred to with the term *runa shimi*, literally '(indigenous) person mouth.'

surface structure derived from a biclausal underlying structure in which the underlying subordinate clause subject — my caused subject — becomes a surface object. Under this analysis, it is not implausible for the underlying subject-status of the caused subject to survive in the form of compatibility with the SS adverbial marker *-shpa*.

Interestingly, although the caused subjects are compatible with the adverbial SS-marker *-shpa*, they are not compatible with the subjunctive SS equivalent *-ngapax*. When a caused subject in a subjunctive clause is coreferent with a canonical subject in the main clause (26a), or vice versa (26b), the only possible marker is the DS subjunctive marker *-chun*.

(26) a. *Pay-ta tushu-chi-ni [__ asi-***ngapax/chun**]*
him-ACC dance-CAUS-1SG [__ laugh-***SUBJ.SS/SUBJ.DS**]
'I make him dance so that he'll laugh.' (2010-04apr-29-MXC-CPC)

b. *Wawa-kuna yachachik wasi-man ri-n, [nyuka-∅ pay-kuna-ta*
child-PL teacher house-DAT go-3, [I-NOM they-PL-ACC
*yacha-chi-***ngapax/chun**]*
know-CAUS-***SUBJ.SS/SUBJ.DS**]
'Children go to school in order for me to teach them (=cause them to learn).' (2010-05may-04-ACO-DJM)

4.2 Possible Non-canonical Properties of the Notional Causer

In addition to showing the possibility of using the SS-marker *-shpa* when the intended coreference is between a canonical subject and a caused subject, sentences (22)-(25) are striking in another way. It is not only caused subjects that are compatible with both the SS-marker *-shpa* and the DS-marker *-xpi* when they are the intended coreferent argument with the subject of another clause. The same seems to be true for the notional **causers**, which in every other way behave like canonical subjects. For example, in (23), the seemingly canonical subject of the subordinate clause is the notional sleep-causer *nyuka* 'I,' which is marked with null nominative case and in main clauses would control agreement on the verb (see (19b)). When the main clause subject is also *nyuka* 'I,' as in (23b), then the two subjects of the two clauses are entirely canonical and coreferent, and we would expect the verb to be marked with the SS-marker *-shpa*, as is the case in every sentence with coreferent canonical subjects (e.g., (10a) and (11a)). Indeed, this is grammatical — yet it is also grammatical for the subordinate verb to be marked with the DS-adverbial suffix *-xpi*, something that is impossible for non-causer canonical subjects. In other words, not only can a caused subject count as a subject when it is itself the switch-reference target, as seen by the possibility of using the SS-marker *-shpa* with all of the (a)-continuations of (22)-(25), it can also interfere with the subjecthood status of the causer when it is the causer that is the switch-reference target. Since compatibility with DS-marking is a property of **non**-subjects, then the possibility of using the DS-marker *-xpi* with all of the (b)-continuations of those sentences shows that the notional causer has at least one non-subject-like characteristic.

It should be noted, however, that the possibility of using the DS-marker *-xpi* to mark intended coreference between a canonical subject and the notional causer seems to be restricted to constructions where the notional causer is the target. When it is the controller in the main clause, as is the case with the first-person singular subject in (27) below, it behaves exactly as a canonical subject, requiring the use of SS *-shpa* and disallowing the use of DS *-xpi*.

(27) *[Na ali mama ka-**shpa/*xpi**-ka], wawa-ta irki-chi-rka-ni*
[Not good mother be-**ADV.SS/*ADV.DS**-TOP], baby-ACC sick-CAUS-PAST-1SG
'Since I am a bad mother, I made my baby sick.' (2010-04apr-08-MXC-CPC)

If this distinction is not simply an artifact of a confusing elicitation session, then it is consistent with Hierarchy (1), which states that arguments show more subject-like properties when they are switch-reference controllers (step (a)) than when they are switch-reference targets (step (b)). If we reverse that claim and make predictions about when arguments should show **non**-subject-like properties, then we would predict that this would occur in step (b) constructions before step (a) constructions. This is exactly what happens with the notional causer: It allows the use of the DS-marker *xpi*, a **non**-subject-like property, when it is the switch-reference target (step (b)), but not when it is the switch-reference controller (step (a)).[12]

5 Problems Posed by Caused Subjects

5.1 Summary So Far

So far I have introduced two accepted non-canonical subjects in IQ — the desiderative and experiencer subjects — and argued for the existence of a third: The caused subject. The specific subject properties exhibited by each of the three non-canonical subjects vary, but Onishi (2001) and specifically Hermon (2001) have proposed that this variation can be analyzed hierarchically. Certain syntactic subject-properties are more readily exhibited by non-canonical subjects than other properties, and on the basis of how many of these properties each type of non-canonical subject exhibits, it is possible to arrange them on a scale of more to less subject-like. In this way Hermon proposes the two interdependent hierarchies that I summarized in (1)-(2). Canonical subjects exhibited the behaviors of all three steps (a)-(c) on Hierarchy (1), desiderative subjects exhibited the behaviors of the first two steps (a)-(b), and experiencer subjects exhibited the behaviors of the first step (a) only.

In this paper I have been focusing on the properties of subjects in IQ's switch-reference system. In sentences containing subjunctive or adverbial subordinate clauses with two coreferent subjects, the switch-reference system requires the use of the SS-suffix *-ngapax* or *-chun* to mark the subordinate clause verb. This property of the language can be used as a subjecthood diagnostic in switch-reference constructions that contain one canonical subject and one non-canonical subject. To the extent that the SS-marker is possible, the non-canonical subject is subject-like, and to the extent that a DS-marker is possible, the non-canonical subject is non-subject-like. It is the compatibility of caused subjects with SS-marking that leads me to propose that they should be considered a third type of non-canonical subject. A summary of the data presented so far in this paper regarding the subjecthood of all three types of non-canonical subject is given in (28).

(28) Possibility of using SS- or DS-marker

[12]Strictly speaking, of course, the very first place where arguments should show non-subject-like properties is in the morphology, which is the highest step, step (c), of Hierarchy (1). Thus, the fact that notional causers can act like non-subjects with respect to switch-reference but not with respect to morphology could be taken as a case where Hierarchy (1) breaks down. However, I am not sufficiently confident of the behaviors of notional causers to make this claim outside of a footnote.

	Main-clause (i.e., controller)		Subordinate-clause (i.e., target)	
	Adverbial	Subjunctive	Adverbial	Subjunctive
DESIDERATIVE	SS/DS	SS only	SS/DS	SS/DS
EXPERIENCER	SS/DS	SS only	DS only	Unclear
CAUSED	SS/DS	DS only	SS/DS	DS only

5.2 Problems with the Hierarchies

As the table in (28) shows, caused subjects are compatible with the use of a SS-marker in an adverbial switch-reference construction, but not in subjunctive switch-reference constructions. This distinction causes problems for Hierarchies (1)-(2).

Hierarchy (1) claims that non-canonical subjects are more likely to be controllers in a switch-reference system than targets. In other words, it is easier to use the SS-marker when the non-canonical subject is a controller in the main clause than when it is in the subordinate clause. This claim is supported by the behavior of experiencer subjects, which are compatible with SS-marking as controllers, but not as targets. However, the distinction for caused subjects seems to be not whether they are targets or controllers in the switch-reference system, but whether they are being used in an adverbial or subjunctive switch-reference system. In the subjunctive switch-reference system, caused subjects cannot license SS-marking even as controllers, the lowest subject-property on Hierarchy (1), while in the adverbial system they can easily be both controllers and targets, the lowest and middle steps on Hierarchy (1).

One approach to account for this data would be to separate the switch-reference systems, such that one is more willing (i.e., lower on Hierarchy (1)) to accept a non-canonical argument as subject-like than the other. For example, it is impossible to use the subjunctive SS-marker *-ngapax* for caused subjects, while the adverbial SS-marker *-shpa* is entirely compatible with them. This suggests that the adverbial switch-reference system is more "lenient," or is lower on Hierarchy (1) than the adverbial switch-reference system. However, the ability of some non-canonical subjects to appear with DS-markers makes this conclusion less satisfactory. Although the adverbial switch-reference system seems more willing to allow the use of the SS-marker, suggesting that it accepts more arguments as subject-like, it is also more willing to allow the use of the DS-marker, suggesting that it likewise accepts more arguments as non-subject like. Specifically, the adverbial switch-reference system allows the use of the DS-marker *-xpi* for both desiderative and experiencer controllers, whereas the subjunctive system requires the use of the SS-marker *-ngapax*. This property suggests that it is the subjunctive system, and not the adverbial system, that is more lenient, as the subjunctive system is willing to accept desiderative and experiencer subjects as entirely unambiguous subjects. According to the subjunctive system, desiderative and experiencer subjects are so subject-like that they require SS-marking when they are controllers in the main clause, and cannot license DS-marking. These observations lead to the conclusion that the different behaviors of IQ's two switch-reference systems cannot be accounted for in terms of leniency. Rather, it seems to be the case that the adverbial system simply allows more variation in the choice of SS- or DS-marking than the subjunctive system.

With respect to Hierarchy (2), the behavior of caused subjects is similarly problematic. Hermon (2001) shows strong evidence that desiderative subjects are more subject-like than experiencers. Specifically, she demonstrates that desiderative subjects exhibit every subjecthood property on steps (a) and (b) of Hierarchy (1), while experiencer subjects exhibit only those properties on step

(a). However, if IQ has a subjecthood hierarchy, then where do caused subjects fit in? Caused subjects are as subject-like as desideratives with adverbial switch-reference, allowing SS-marking both as controllers and as targets, but they are the least subject-like of all of them when evaluated by the subjunctive switch-reference system.

5.3 Evidence from Other Areas of the Grammar

Although this paper has focused on the switch-reference system, there are a number of other syntactic patterns which Hermon describes as separating subjects from objects in IQ. Two that I have investigated with respect to caused subjects are those of raising and passivization. Briefly, if a language has raising predicates, it is more likely to raise subjects than objects. Hermon gives data indicating that experiencer subjects cannot be raised, while desiderative subjects can. I, however, have found that my consultant accepts the raising of both desiderative and experiencer subjects. Regardless of this disagreement, however, she strongly rejects the raising of caused subjects. Thus, (29)-(30) below are good, while (31) is bad.

(29) *Kikin-∅*[13] *yarxa-y yari-ngi*
you-NOM hungry-NMLZ seem-2SG
'You seem to be hungry.'

(30) *(Kikin anfa-shpa), punyu-naya-y yari-ngi*
(you yawn-ADV.SS), sleep-DESID-NMLZ seem-2SG
'(Because you are yawning,) you seem to want to sleep.

(31) * *Wawa punyu-chi-y yari-n*
baby sleep-CAUS-NMLZ seem-3
'The baby seems to have been put to sleep.' (2010-04apr-15-MXC-CPC)

Thus, although Hermon's and my investigations thus yield different results with respect to experiencer subjects, the behavior of these raising constructions clearly puts caused subjects in the non-subject category.

The non-subject-like status of caused subjects can further be seen with passivization. Briefly, like objects and unlike experiencer and desiderative subjects, caused subjects can be easily passivized: (32a), which promotes a caused subject under passivization, is perfectly fine, while (32b-c), which attempt to promote an experiencer and a desiderative, respectively, are unacceptable.

(32) a. *Wawa-ka nyuka miku-chi-shka ka-rka-∅*
Child-TOP I eat-CAUS-NMLZ be-PST-3
The child was fed (=made to eat) by me.

b. * *Nyuka-ka chiri-shka ka-rka-ni*
I-TOP cold-NMLZ be-PST-1.SG
Intended: I was colded.

c. * *Nyuka-ka punyu-naya-shka ka-rka-ni*
I-TOP sleep-DESID-NMLZ be-PST-1.SG

[13]Note that here the subject must be nominative, not accusative. Evidently, when it has been raised from the domain of influence of the experiencer or desiderative predicate, the accusative case-marking requirement disappears.

Intended: I was desired to sleep. (Hermon 2001)

On the basis of these syntactic tests, then, it seems that caused subjects are more object-like — passivizable but unraisable — than experiencer and desiderative subjects. Simply by tallying of syntactic properties, then, it seems appropriate to put caused subjects lowest on the subjecthood hierarchy. A revised version of hierarchy (2) is given below.

(2′) canonical subject > desiderative > experiencer > caused > non-subject

The problem with this particular hierarchy, however, is that, with the addition of caused subjects, it is descriptive but not predictive. Although arguments that are higher on the hierarchy possess **more** subject properties than lower arguments, it is not the case that higher arguments exhibit the **same** properties as the lower arguments. Although caused subjects are the lowest on the hierarchy, they are compatible with SS-marking in the adverbial switch-reference system when they are targets of that system. Experiencer subjects, which are higher than caused subjects, cannot do this. Even if the evidence from subjunctive clauses and DS-marking had not caused problems for Hierarchy (1), the addition of caused subjects to Hierarchy (2′) means that there is no longer a principled relation between those two hierarchies. It is no longer the case that each new step of Hierarchy (1) corresponds to the new set of properties exhibited by each new argument type on Hierarchy (2). Their explanatory power is thus vastly weakened.

6 Conclusion

Using hierarchical structures in the description of a language's grammar allows the linguist to account for cooccurrences of particular properties in some principled way. In Imbabura Quichua, it has been proposed that there are hierarchies both of subjecthood properties and of non-canonical subjects, such that the varying behaviors of non-canonical subjects can be explained according to the step on which the subjecthood properties fall on Hierarchy (1) and where the non-canonical subjects themselves fall on Hierarchy (2). In this paper, I have shown that, although much of the behavior of IQ non-canonical subjects does mostly align with these proposed hierarchies, the addition of caused subjects to the inventory of non-canonical subjects is problematic for Hierarchy (2). I have further shown that the two different switch-reference systems do not seem to diagnose subjecthood in exactly the same way, which suggests that using behavior in a switch-reference system as a subjecthood diagnostic in Hierarchy (1) is an overly simple approach. Thus, although the hierarchical analysis of IQ non-canonical subjects accounts for most of the data in the language, it follows the noble tradition of all descriptive grammars, and leaks with the best of them.

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REPORT 15

SURVEY OF CALIFORNIA AND OTHER INDIAN LANGUAGES

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