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## Complexity and constituent order in Matihuaca (Huanuco) Quechua

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# COMPLEXITY AND CONSTITUENT ORDER IN MATIHUACA (HUANUCO) QUECHUA<sup>1</sup>

Anne Stewart

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## 0. Introduction

This study<sup>2</sup> is the product of an investigation into Quechua sentence structure from the perspective of functional grammar. Functional grammar (FG) was proposed by Simon Dik in Coordination (1972) and later revised and elaborated in Functional Grammar (1978). Three levels of functional notion are to be considered in applying the model to a linguistic expression:

1. Pragmatic functions, such as "theme" "tail" "topic" and "focus" give the informational status of the linguistic expression within the wider communicative setting.
2. Semantic functions, such as "agent" "goal" and "recipient" give the roles of the various constituents within the predication.
3. Syntactic functions, such as "subject" and "object" give the perspective of the predication within that communication setting.

A linguistic expression is a composite determined by the combined impact of these three levels. Although each level can be analyzed independently, it is not autonomous: "pragmatics is the all-encompassing framework within which semantics and syntax must be studied; semantics is subservient to pragmatics and syntax to semantics; the priorities run from pragmatics via semantics to syntax." (Dik 1978:5)

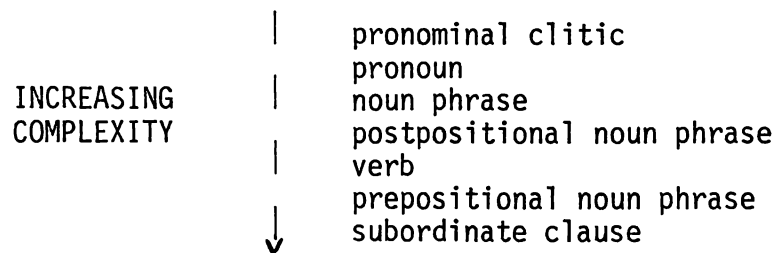
Constituents in a sentence are brought into linear order according to certain functional patterns determined by the syntactic and pragmatic functions of the constituents, influenced by the unordered semantic functions. In considering constituent order, however, one needs to examine an additional factor, namely the syntactic categories of the various elements being ordered and the pressure which categorial differences bring to bear on the functional determinants of constituent order. The actual constituent order patterns found in a language are the result of three interacting forces (ibid p. 174):

1. the functional patterns, that is, the tendency to always express the same function in the same structural position;
2. the tendency to designate special positions to certain categories of constituents; and
3. the categorial complexity of the constituents.

This paper is concerned with the last of these. The following will be the central concern in the rest of this paper:

LIPOC There is a Language Independent Preferred Order of Constituents (LIPOC) according to which constituents are preferably placed from left to right in increasing order of complexity. (Dik 1978:192)

That is to say, we can expect the following hierarchy of increasing complexity to influence the order of occurrence in the sentence:



In addition to this hierarchy, there is a tendency for

1. an unaffixed constituent of any category to precede an affixed one,
2. a single constituent of any category to precede a conjoined pair of constituents of that category, and
3. a simple constituent (i.e., one without internal complexity) to precede a constituent of the same category which is internally complex (as e.g., by having an embedded clause within it).

LIPOC is used to explain word order in the following way. If the functional pattern of a sentence is compatible with LIPOC (i.e., if they predict the same order), then LIPOC has no effect; but if the functional pattern and LIPOC are at variance, the language is expected to alter its patterning in the direction of LIPOC. For example, in German:

- |                              |     |                                 |
|------------------------------|-----|---------------------------------|
| (1) Er gab mir das Buch.     | --> | Er gab das Buch zu mir.         |
| <i>'He gave me the book'</i> |     | <i>'He gave the book to me'</i> |
| PRO VERB PRO NP              |     | PRO VERB NP NP                  |
| S IO DO                      |     | S DO IO                         |

LIPOC can thus account for differences in the ordering patterns of constituents with the same function but different category. LIPOC is meant to apply primarily to the pattern of "nuclear" constituents (verb, subject, object), but does not preclude wider application to the "satellite" constituents (time, location, circumstance, etc.).

### 1. LIPOC and Matihuaca Quechua

We turn now to the structure of sentences in Matihuaca Quechua (MQ). All the sentences included below are drawn from natural texts--either written or spoken--by residents of Matihuaca.

The purpose of this paper is to evaluate LIPOC relative to the Matihuaca Quechua sentence. LIPOC is an explicit, falsifiable claim, and therefore we can expect that either data from MQ will falsify the claim or not. Note that we can not expect to prove LIPOC for MQ, but we might find cases which seem explainable by means of LIPOC.

In order to set the stage for a review of LIPOC's influence (or lack thereof) in MQ, we need to consider the basic patterns we might expect (irrespective of LIPOC). Greenberg (1966) has correctly classified Quechua as an SOV language; i.e., Quechua is of the type of language which demonstrates subject-object-verb as the dominant word order. However, while Quechua strongly demonstrates most of the other typological characteristics of an SOV language, the order of constituents in its sentences only weakly conform to the subject-object-verb order. There are in fact relatively few sentences (in natural text) which have both a subject noun phrase and an object noun phrase. (The person of the subject and object are marked by suffixes on the verb.) It is possible to elicit sentences (like e.g. 'John hit Paul') with any order of subject, object and verb. And even in natural text we find examples such as the following:

(2) Chay yapay tapu-n soorru kondor-ta.

That	again	ask-3	fox	condor-ACC
		VERB	NP(S)	NP(O)

*'The fox asked the condor that same thing again.'*

Thus it is apparent that constituent ordering is very free, not being rigidly defined in terms of syntactic functions. Rather, it seems, pragmatic function, semantic function, and LIPOC play a significant role in defining constituent order, and this makes MQ a good language for evaluating LIPOC.

In the above-given hierarchy of complexity of constituents, there are two which are of no concern for MQ, namely the pronominal clitics and the prepositional noun phrases. For the latter, Quechua has postpositional noun phrases (NPP). Thus the following suffices for MQ as the hierarchy of increasing complexity, where  $x < y$  reads:  $y$  is more complex than  $x$ .

PRO < NP < NPP < V < SUB

In addition to this hierarchy, constituents of the same (gross) category may differ in complexity. For example, a NP which has a conjoined NP is more complex than a simple NP, a NP which has a subordinate clause (relative clause or complement) is more complex than a simple or conjoined NP. Subordinate clauses are increasingly complex to the degree to which they themselves may contain complex constituents (e.g., subordinate clauses). And -- I surmise-- a simple noun phrase may be made more complex by the number and kind of suffixes it bears. The following summarize these differences:

NP < [NP(NP)] < [NP(SUB)]

SUB < [SUB(SUB)]

NPP < NPPP < NPPPP < ...<sup>3</sup>

Consider now the following general schema (given by Dik, 1978:175) for functional patterns:

P2, P1 [ (V) S (V) O (V) ] P3

P1, P2 and P3 are non-nuclear, satellite positions such as would be occupied by constituents which have some special pragmatic status, e.g., topic, focus, afterthought, ... LIPOC applies only to the bracketted part of this schema. This predicts that the subject will precede the object in any language.<sup>4</sup> The relative position of the verb in this schema determines whether the language is VSO, SVO, or SOV.

Note that P2 and P1 may be very complex without violating LIPOC; for example, in the following example, the initial (adverbial) clause is very complex (far more than the noun phrases which follow it); however, it occupies a position (P1) outside of the nuclear clause, and thus cannot be taken as a counter-example to LIPOC:<sup>5</sup>

(3) [Chay yunkayakan kay-nuy heqa-rka-ykA-mu-pti-n]

That giant(s) this-SIM climb-up-DIR-from:far-ADV-3  
SUB (ADV)

impaña-sha [inti] [ñawi-n-ta.]

blind-3PERF sun eye -3-ACC  
VERB NP(S) NP(O)

*'When the giants likewise climbed up there, the sun blinded their (the snakes') eyes.'*

The complexity and ordering of such non-nuclear constituents is not within the main scope of this paper. This does not eliminate, however, the possibility of a broader application of LIPOC to non-nuclear constituents such as purpose clauses.

- (4) [Noqa-qa] [pwerta-ta] kitra-shaq imanaypa-si  
 I-TOP door-ACC open-1FUT what:doing-too  
 PRO(S) NP(O) VERB

[kay wawqi-nchi tooru-kuna-ta qeshpi-ra-ari-nanpaq.]  
 this brother-12 bull-PL-ACC escape-out-PL-in:order:to  
 SUB (PURP)

*'I will open the door, so doing in order for our brother bulls to escape.'*

In (4) we have seen LIPOC extending to satellite constituents. Consider now how LIPOC applies to the following MQ examples:

- (5) [Wamra-n-qa] kikilan [chay barreeta-ta] alsa-q.  
 child-3-TOP himself that bar -ACC pick:up-N. PST  
 NP(S) NP(O) VERB

*'The child would pick up that bar by himself.'*

- (6) [Qam] [ima- paq- mi] [haapa runa-kuna-ta-qa]  
 you what-PURP-AFF foreign man -PL -ACC-TOP  
 PRO NP(O)

[mana reqi-nqa-nchi runa-ta] pacha-chi-nki?  
 not know-NOM-12 man-ACC lodge-CSE-2  
 NP(SUB) APPOS TO OBJECT VERB

*'Why do you give lodging to foreigners, men that we don't know?'*

The functional pattern is the expected SOV and the constituents occur in order of increasing complexity as predicted by LIPOC. Thus, the functional pattern and LIPOC are compatible; the sentences are well-formed and natural.

In the following examples the object NP's occur after the verb because of their complexity. Recall that according to LIPOC a conjoined pair should occur to the right of a simple, non-conjoined member of the same category:

- (7) Y chay-la-na [warmi-qa] bisya-paaku-sha  
 and that-just-now woman-TOP visit-PL-3PERF  
 N(S) VERB

[michay-ta uusha-ta,] chay-paq.  
 pasture-ACC sheep-ACC that-PURP  
 NP(O)

*'And well now this woman would go to pasture her sheep, for that.'*

(8) Chay-kama-shi [hipash-qa] shuwara-sha ka-sha

That-LIM-REPOR girl -TOP wait-3PERF be-3PERF  
N(S) VERB

[chay runa-ta o parla-q-masi-n-ta] [pichqa hunaq-kama]

that man-ACC or talk-AG-COMP-3-ACC five day -LIM  
NP(CONJ) (0) NP(TIME)

[huk shaapu pichi-la-n-wan] [kamcha-la-n-ta katru-paku-r].

one shaggy dog-just-3-with corn-just-3-ACC chew -REP-ADV  
NP(CIRCUMSTANCE) SUB (ADV)

*'Up until that time, the girl had been waiting for that man, her promised one, for five days, with her shaggy dog, chewing toasted corn.'*

In the following the objects are subordinate clauses, and thus according to LIPOC occur to the right of where they would ordinarily occur (in this case they move from pre-verbal to post-verbal):

(9) [Hipash-qa] willaku-sha-na ka-sha [kay -nuy paasa -nqa-n-ta].

girl -TOP tell-3PERF-just be-3PERF this-SIM happen-NOM-3-ACC  
N(S) VERB SUB (0)

*'The girl had just told them how it had happened.'*

(10) Hinarkur [noqa] willa-paa-shayki, [noqa kay Huanuco-tru ka-nqa-a-ta].

LINK I tell-BEN-1 / 2FUT I this Huanuco-LOC be-NOM-1-ACC  
PRO(S) VERB SUB (0)

*'Then I will tell you about my time here in Huanuco.'*

(11) Y mayqa-n-si [mana willaka-ari-sha-chu]

and which-3-too NEG tell-PL-3PERF-NEG  
PRO(S) VERB

[yarpa-y-ta qo-naka-ari-nqa-n-ta].

think-NOM-ACC give-RECIP-PL-NOM-3-ACC  
SUB (0)

*'And which ones didn't tell how they had given one another the idea.'*

(12) Kuya-shqa mama-a, [noqa] muna-a [ali ka-na-yki-ta],

love-part mother-1 I want-1 well be-SUB-2-ACC  
 PRO(S) VERB SUB (0)

sin qeshya-r y lapa-n familya-nchi-kuna-wan.

w/out sick-ADV and all- 3 family -our -PL-with

*'Dear mother, I want you to be well, without illness, and with our whole family.'*

In the following examples (13,14) the order is OVS, an even greater departure from the typical SOV order, but it is in perfect accord with LIPOC:

(13) [Pampa-ta] aywa- mu- sha [chakwan qantraana].

ground-ACC go-from:far-3PERF old:lady wicked  
 N(O) VERB NP(S)

*'The wicked old woman fell all of the way to the ground.'*

(14) Chawra-qa hatun-ya- pti-n-na- qa [wamra-ta-qa] eskwela-man trura -sha

then -TOP big-become-ADV-3-now-TOP child-ACC-TOP school-GOAL put -3PERF  
 N(O) VERB

yatraku-nanpaq [chay wamra-pa mama-n-qa].

learn - PURP that child-GEN mother-3-TOP  
 NP(S)

*'Then when he had become big, that child's mother put him in school, so that he would learn.'*

In the following examples, LIPOC seems responsible for the subjects occurring post-verbally:

(15) Chay-pita- qa hukta wallpa waqa-ra- mu-pti-n-na- qa aywa-n

that-after-TOP once rooster cry-PUNC -to-ADV-3-now-TOP go - 3  
 VERB

[chay minkaku-nqa runa] warmi-nti-n traqtra-paku-rka-nqa-n-pita.

that collab- NOM man woman-with-3 chew:coca-REP-up-NOM-3-after  
 NP(S)

*'Then, after the rooster had crowed once, the man who was collaborating left, after having chewed coca with his wife.'*



(16) Hinarkur-qa chay chakay taapa-paaku-sha [kasta-n-kuna marka masi-kuna].

LINK-TOP that night guard-PL- 3PERF family-3-PL town COMP-PL  
VERB NP(S)

*'After that, that night, her family and the townspeople kept guard.'*

(17) Nir miku-rku-pti-n-shi yarpa-ra- mu- -n

then eat- up-ADV- 3-REPOR think-PUNC-from:far-3  
VERB

[wasi-yoq-pa huk mishi-n y huk alqu-n].

house-have-GEN one cat-3 and one dog-3  
NP(S)

*'Then when he had eaten, one of the owner's cats and one of his dogs schemed it up.'*

In (18) the functional pattern is OOV; note that the objects occur in order of increasing complexity:

(18) [Kaama-ta-shi] [ishka-n runa-kuna-ta] qo-paaku-n puñu-nanpaq.

bed-ACC-REPOR two- 3 men- PL- ACC give-PL- 3 sleep- PURP  
N(O) NP(IO) VERB

*'She gave the two men a bed to sleep in.'*

In the following examples, even in the absence of any surface subject, the objects are post-verbal, presumably because of their complexity:

(19) Chawra-na-qa rika-ra- chi- n-shi [charki warka-ra-yka-q-ta].

then-now-TOP see-PUNC-CSE- 3-REPOR jerky hang-STAT-IMPV-NOM-ACC  
VERB SUB (O)

*'Then he showed him the jerky he had hanging up.'*

(20) Shuwa-ra- yka- n [gaallu- n kanta-mu- na- n-ta].

wait-STAT-IMPV-3 rooster-3 sing-to:there-SUB-3-ACC  
VERB SUB (O)

*'He is waiting for the rooster to crow.'*

(21) [Mana-mi imanay-pa-si puydi-shwan-chu]

NEG-AFF what:do-GEN-too be:able-12COND-NEG  
VERB

[kay wamra-ta-qa wañu-chi-y-ta].

this child-ACC-TOP die-CSE-NOM-ACC  
SUB (0)

*'No matter what we do, we wouldn't be able to kill this child.'*

(22) [Mana musya-sha-chu] [wamra-n ka-nqa-n-ta].

NEG know-3PERF-NEG child-3 be-NOM-3-ACC  
VERB SUB (0)

*'He didn't know that it was his child.'*

(23) Chay-truu-raq reqi-sha shumaq-qa [kondenaadu ka-nqa-n-ta].

that-LOC-even know-3PERF well- TOP condemned:one be-NOM-3-ACC  
VERB SUB (0)

*'It was there that she finally realized that he was a condemned soul.'*

(24) Qaya-kaa-mu-pti-n-qa [mana-mi willaku-shaq-chu]

call-PASS-to:here-ADV-3-TOP NEG-AFF tell- 1FUT-NEG  
VERB

[aywaku-nqa-yki-ta-qa].

go- NOM-2-ACC-TOP  
SUB (0)

*'If he calls, I won't tell him about your going.'*

## 2. Special Cases of LIPOC

2.1 LIPOC and split constituents. Examples (25)-(26) contain multiple objects divided by the verb.

(25) [Kwentu-ta] willa-paa-shayki [unay kwentu-ta

story-ACC tell-BEN- 1/2FUT ancient story-ACC  
N (0) VERB NP(0)

unay chacha-kuna-pa-ta, qantraana-pa-ta].

ancient grdma-PL-GEN-ACC wicked:old:woman-GEN-ACC  
NP(0)

*'I'm going to tell you a story, an old story from our grandmothers, about a wicked old woman.'*

- (26) Chawra [altu-ta-shi] heqa-sha [syelu-ta-na-shi mitaa-ta-na-shi.]  
 Then high-ACC-REPOR climb-3PERF sky-ACC-now-REPOR mid-ACC-now-REPOR  
 N(0) VERB NP(0)

*'Then she climbed to the heavens, to the middle of the sky.'*

2.2 LIPOC and non-nuclear constituents. Although we have already referred somewhat to the broader effect of LIPOC on satellite constituents, it is worth mentioning that the more complex constituents of Quechua sentences tend to occur towards the end. (This may be an accommodation to the way the brain processes sentences.) Consider the following:

- (27) Altu-pa-truu-qa syelu-man [Dios-ni-nchi-pa laadu-n-man] traya-sha  
 high-GEN-LOC-TOP sky-GOAL God-Ø-12-GEN side-3-GOAL arrive-3PERF  
 N(LOC) N(LOC) NP(LOC) VERB  
 [warmi wamra] [turi-n-ta kuchutra-sha-ta aycha-ta qepi-ku-rku-r].  
 girl child bro -3-ACC mince-PART-ACC flesh-ACC wrap-REFL-up-ADV  
 NP(S) SUB (ADV)

*'In the heights, she arrived in heaven, at our God's side, the girl child with her brother's minced flesh wrapped up.'*

The final bracketted portion of (27) is a single adverbial clause.

- (28) Chawra-qa [chay hunaq-qa] [huk runa-ta] minka-ku-u  
 then -TOP that day-TOP a man-ACC hire-REFL-1  
 NP(TIME) NP(0) VERB  
 [pay yayka-paa-maa-nanpaq [maki maya-q]]  
 he enter-BEN-3/1-PURP hand hear-PURP  
 SUB (PURP)

*'Then that day I hire a man to go in for me and ask for her hand.'*

The subordinate purpose clause of (28) itself contains a (subordinate) purpose clause. As LIPOC predicts, due to its complexity, it occurs sentence final.

2.3 LIPOC and general-specific relationships. A concept may be communicated or a referent established in a two step fashion, first with some more general statement (or noun phrase) and then with some more specific statement. This is undoubtedly because--in most cases, at least--the listener needs the general information as a basis for interpreting the specific information. But it is also often the case that the specific information is more detailed,

expressed by a more complex constituent. Thus in these cases LIPOC concords well with the facts.

(29) Trakra-man traya-yku-r qala-yku-ra-a [champa wiruy-ta]

field-GOAL arrive-DIR-ADV begin-DIR-PAST-1 fiber cane-ACC  
SUB (CIRCUM) VERB NP(0)

[marsu killa-tru yapya-nqa-a-ta]]

March month-LOC plow-NOM-1-ACC  
SUB (0)

*'When I arrived at my field, I began to clear what I had plowed in March.'*

(30) Noqa moosu-ya-ru-r-qa

I young:man-become-out-ADV-TOP  
PRO(S) SUB (ADV)

[ishkay trunka wata-yoq ka-yka-r] rimapa-ra-a warmi-i-ta.

two ten year-having be-IMPV-ADV engage-PAST-1 wife-1-ACC  
SUB (ADV) VERB N(0)

*'When I had become a young man and was twenty years old I became engaged to my wife.'*

(31) Luychu yatra-n [chunyaq hirka-kuna-tru] [mana runa puri-na-n-tru]

deer live-3 silent hill-PL-LOC NEG man walk-NOM-3-LOC  
N(S) VERB NP(LOC) SUB (LOC)

*'The deer lives in the quiet hills where man doesn't wander.'*

(32) Y miku-y- ta- shi mali-chi-n [chay trakra-n-pita koseecha-nqa-n-ta]

and eat-NOM-ACC-REPOR try-CSE-3 that field-3-from harvest- NOM-3-ACC  
N(0) VERB SUB (0)

*'And he gave him some food to taste that he had harvested from his field.'*

### 3. Apparent Exceptions to LIPOC

In many instances, it is impossible to explain the constituent order of a sentence without referring to the larger context of which it is a part. Functional patterns and semantic or pragmatic factors may, in such cases, overpower the force of LIPOC. Consider the following sentence with OVS order, the object of which is a subordinate clause (nominalized verb):



- (36) Chawra-qa [ama aru- chi-shun- chu] duyñu-nchi-ta!  
 then- TOP [NEG work-CSE-12FUT-NEG owner-12- ACC  
 VERB N(O)

*'Then let's not make our owner work!'*

Could it be that in these cases the verb takes one of the "functional" positions P1 or P2, thereby escaping LIPOC?

Question words (WH-words) generally occur sentence (or clause) initial in a content question. This again, cannot be taken as a violation of LIPOC because, as generally agreed, the question word has some distinguished pragmatic role (e.g., focus). Examples follow:

- (37) Ooye ima- ni- shunki-mi [kay duyñu-nchi]?  
 listen what-say-3/2-AFF this owner-12  
 Q WORD/VERB NP(S)

*'Hey, what did our owner say to you?'*

- (38) Imanir-taq kay oora-kama-qa kantamu-n-chu gaallu- qa?  
 why- Q this hour-LIM- TOP sing- 3-NEG rooster-TOP  
 Q WORD VERB N(S)

*'Why hasn't the rooster crowed before now?'*

Note that the time constituent of (38) is after the question word; this does not violate LIPOC because the time phrase is a satellite rather than a nuclear constituent. In (39), however, where the interrogative is more complex, it is not fronted:

- (39) Bweeno qam-kuna [may- pita -taq y may- pa-m] aywa-rka-nki?  
 Well you-PL where-from- Q and where-to-AFF go- up- 2  
 PRO(S) Q WORDS (CONJ) VERB

*'Well, you (all), from where and to where are you going?'*

In some cases complex constituents which, according to LIPOC, should occur more to the right occur in their typologically expected position. For example, in (40) and (41), although the objects are subordinate clauses, they occur pre-verbally (perhaps because they are not sufficiently complex to position further to the right).

- (40) Rika-yku-nanpaq-raq [wamra-n ka-nqa-n-ta] musya-paaku-sha.  
 see- DIR-PURP- even child-3 be-NOM-3-ACC know- PL- 3 PERF  
 SUB (0) VERB

*'Finally upon seeing him, he knew that it was his child.'*

- (41) Chawra-qa kondenaadu-qa [ima-nuy- pa aywa-y-ta-si] musya-sha- chu.  
 then- TOP condemned-TOP what-SIM-GEN go-NOM-ACC-also know-3PERF-NEG  
 N(S) SUB (0) VERB

*'Then the condemned soul didn't know how to go.'*

On the other hand, examples like (19) - (24) show that such objects often occur post-verbally.

#### 4. Apparent Violations to LIPOC

The following contradict LIPOC: In (42) the pronominal subject follows the verb:

- (42) Chay-nuy-pa warmi-i-wan tiya-paaku-ra- a noqa  
 that-SIM-GEN wife-1-with live-PL- PAST-1 I  
 VERB PRO(S)

kay Matihuaca marka-tru.

this Matihuaca town-LOC

*'That's how my wife and I started living together here in Matihuaca.'*

In (43) the coordinate object 'to drink and chew coca' occurs pre-verbally while the simple subject occurs post-verbally:

- (43) Ni- y- ta usha-rka-ari-pti-n-qa, [upya-y- ta traqtra-y- ta]  
 say-NOM-ACC end- up-PL-ADV-3-TOP drink-NOM-ACC chew:coca-NOM-ACC  
 NP(0)

qala- yka-paaku-u lapa-a-kuna.

begin-DIR-PL- 1 all-1- PL  
 VERB PRO(S)

*'When the discussion was finished, we all began to drink and to chew coca.'*

In (44), LIPOC predicts that the very complex object should occur farther to the right:

- (44) Chay-kama-shi [chay huk-kaq turi-n-ta] [chay warmi wamra-pa turi-n-ta]  
 that-LIM-REPOR that one-DEF bro-3-ACC that girl child-GEN bro-3-ACC  
 NP(0) NP(0)  
 pishta- sha, miku-nanpaq, [chay chakwan].  
 slaughter-3PERF eat- PURP that wicked:old:woman  
 VERB NP(S)

*'Then that wicked old woman slaughtered that one brother, that girl child's brother, in order to eat him.'*

One could assume that the narrator stated the subject, 'that wicked old woman,' as an afterthought, since the subject is understood from the context.

In (45), LIPOC would predict that the object follow the subject and perhaps even the verb:

- (45) Chay-tru tiya-yka- r-shi [oosu-pa churi-n-ta] warmi-qa watramu-sha  
 that-LOC live-IMPV-ADV-REPOR bear-POSS offspring-3-ACC woman-TOP bear-3PERF  
 NP(0) N(S) VERB

*'Living there, the woman gave birth to the bear's offspring.'*

I would expect further study to reveal semantic and pragmatic explanations for these exceptions to LIPOC.

##### 5. Conclusions about LIPOC in the light of Matihuaca Quechua

Much of the evidence from MQ is in favor of LIPOC. However, Dik's schema could be expanded somewhat to account for an agglutinative language like Quechua where some measure of complexity is due to many suffixes as opposed to many words. For example, (46a) should perhaps be counted as more complex than (46b):

- (46a) Pillchi- paa- ma-na-nchi-pita *'lest it splatter on us'*  
 splatter-BEN- 3/1-NOM-12-from  
 (46b) wayi- pita *'from the house'*  
 house-from

Perhaps noun phrases could be judged more complex when they have more suffixes; cf (47a), (47b):



(47a) wamra-kuna-la-wan-shi                    *'just with the children (reportative)'*  
       child-PL-just-with-REPOR

(47b) wamra-wan                                 *'with a/the child'*  
       child-with

Finally, one wonders to what extent complexity is a matter of length. Generally, complex constituents are longer (i.e., have more suffixes or words) than simple ones.

#### 6. Conclusions about Quechua in light of LIPOC

What is the contribution of LIPOC to the ordering of Quechua sentences? I propose that three elements determine word order, LIPOC being one of these, and that these are of different degrees of influence. In order of decreasing influence they are:

1. Semantic-pragmatic considerations
2. LIPOC
3. Typological pressure toward SOV

The LIPOC-preferred order may be violated due to considerations of semantic role or pragmatic influences (such as can be seen only from considering the communication situation). LIPOC is responsible for many violations of the typologically-expected SOV order.

## FOOTNOTES

1. Quechua is a family of languages spoken by over six million persons in western South America. The present paper is based on field work carried out by the author in the town of Matihuaca, district of San Rafael, province of Ambo, department of Huanuco, Peru in March through September of 1980. Matihuaca Quechua has the following phonemes: p, t, ç (ch), ç̣ (tr), k, q (post-velar obstruent), s, š (sh), h, m, n, ñ, l, ì (ll), r, ř (retroflex spirant), w, y, i, a, u. The following symbols and abbreviations have been used:

ACC	Accusative	NP	Noun Phrase
ADV	Adverbial	NPP	Postpositional Noun Phrase
AG	Agent	O	Object
BEN	Benefactive	PART	Past Participle
BK/FTH	Back and Forth	PASS	Passive
CSE	Causative	PERF	Perfect
COMP	Companion	PL	Plural
COND	Conditional	PRO	Pronoun
CONJ	Conjoined	PUNC	Punctiliar/Inchoative
DEF	Definitivizer	PURP	Purposive
DIR	Directed	REC.P.	Recent Past
DO	Direct Object	RECIP	Reciprocal
FUT	Future	REFL	Reflexive
IMPFV	Imperfective	REP	Repetitive
IO	Indirect Object	REPOR	Reportative
LIM	Limitative	S	Subject
LOC	Locative	SIM	Similar
N.PAST	Narrative Past	STAT	Stative
NEG	Negative	SUB	Subordinate Clause
NOM	Nominalizer	TOP	Topic

1	First Person
2	Second Person
12	First Person Plural Inclusive
3	Third Person
1/2	First Person Subject, Second Person Object

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3. Thus, a noun phrase with but one postposition (NPP) may be less complex than a noun phrase with two or more postpositions (NPPP, NPPPP...)
4. Dik was apparently unaware at this time of Desmond Derbyshire's work in Hixkaryana (Carib) of Brazil. (See especially Derbyshire:1977.)

5. Brackets mark non-verb nuclear sentence constituents.

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