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SECOND LANGUAGE ACQUISITION OF SPANISH MORPHO-SYNTAX BY QUECHUA-SPEAKING CHILDREN

by

Susan E. Kalt

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Dedication

For

Charles Gilbert Kalt

and with vivid memories of

Nadine Genevieve Nichols Kalt

with love

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Abstract

Assuming that persons acquiring a second language (L2) have continuous access to the same Universal Grammar (UG) as monolingual children acquiring their first language (Flynn and Martohardjono 1994), there remains controversy as to how to best characterize UG, and whether or not L2 acquirers transfer the functional features of their first language in the initial state (Schwartz and Sprouse 1996).

One well-studied area regarding monolingual development and UG constraints pertains to the ability to rule out the reflexive interpretation of a non-reflexive element (Deutsch, Koster and Koster 1986, Chien and Wexler 1990, Padilla 1990, Baauw, Philip and Escobar 1997, Baauw 1999). Dutch and English monolinguals five to ten years old are better able to rule out non-reflexive readings of reflexive elements than vice versa, but Spanish speaking children are not. Baauw (1999) proposed that Spanish clitics, whose interpretation results from head movement, are exempt from this reflexive privilege effect.

I measured the development of sixteen monolingual Bolivian Spanish and eighty-four L2 Quechua-Spanish-speaking children's ability to interpret reflexive vs. oblique and locative vs. possessive clitics between ages five and fifteen years, using a culturally appropriate picture selection task (Gerken and Shady 1996). I claimed that both groups' performance should illuminate the reflexive privilege

effect, and that the L2 group should perform better on locative clitics than possessives if functional feature transfer from Quechua determined their initial grammar of Spanish.

I found no evidence of reflexive privilege in the monolingual group, whose performance was nearly perfect from the earliest age tested, cohering with other monolingual Spanish speaking children in the literature.

The L2 group displayed reflexive privilege beginning around age eight and continuing throughout. Two explanations are proposed: a) reflexive privilege is a processing phenomenon favoring successful interpretation of the clitic bound in the most local domain, and/or b) frequent OV sentences in this group's input discouraged them from interpreting clitics as resulting from head movement.

The L2 group performed better on oblique third person possessive sentences than on oblique third person locatives. This pattern provides evidence against initial feature transfer from L1.

Preface

Quechua today is the most widely spoken indigenous language of the Americas (Campbell 1997), and it has persisted as a vibrant vehicle of communication despite more than half a millennium of contact with Spanish, the language of the politically dominant class in the Andes. Today there is a concerted effort on the part of the Andean ministries of culture and education to recognize and enhance the role of the indigenous languages of the region. It would be greatly informative to study the second language acquisition of Quechua by Spanish (or English) speakers, both from a purely linguistic point of view in terms of the grammatical issues it would raise, as well as from a social point of view in terms of placing Quechua on equal footing with other world languages as an important language to be learned.

Nonetheless, this thesis is about the acquisition of Spanish rather than Quechua. My own interest in both languages stems from my having lived for a year with a Bolivian family in Cochabamba in 1977. Spanish became my passion that year, and for many years afterward I sorted out what it meant to inhabit more than one linguistic and cultural world. The inquiry led me through a variety of studies and jobs, and eventually to graduate school.

A year into studying Chomsky's theory of Universal Grammar, I found a book by Gabriella Hermon (1985) which used the properties of Quechua syntax (as well as that of other languages) to illustrate how a modular theory of grammar can account for cross-linguistic variation. Suddenly, obscure elements of the theory came alive for me. Soon after that it was clear that my thesis topic should unite three elements: the Spanish I had learned as a second language in Bolivia, the Quechua language which permeates Bolivian culture and language at many levels, and the theory of Universal Grammar which explores the cognitive underpinnings of what they have in common.

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1 Introduction

1.1 Preliminary Considerations

Recent advances in the theory of the innate human language faculty known as Universal Grammar (UG) have made it possible to examine the process and product of second language acquisition with a precision previously unknown. The theory of Principles and Parameters (Chomsky 1981) and its pared down version in the Minimalist Program (Chomsky 1995) provide the conceptual framework for investigations of several questions which are fundamental to understanding second language acquisition: how can we best characterize the formal system that allows us to generate and comprehend the sentences of a language, how can we characterize what must be learned during the language acquisition process, and how can we best characterize differences among a given group of languages; for example, the learner's native language, the second language to be acquired, and the interlanguages or intermediate grammars generated by the learner as she approximates the target?

One of the earliest articulations of a model capable of focusing productive investigation into these questions was the following, first adopted in the early 1980's:

> UG [Universal Grammar] provides a fixed system of principles and a finite array of finitely valued parameters. The notion of grammatical construction is eliminated, and with it, construction-particular rules. Constructions such as verb phrase, relative clause, and passive remain only as taxonomic artifacts, collections of phenomena explained through the interaction of the principles of UG, with the values of parameters fixed. (Chomsky 1995:170)

Within such as model, the innate principles of UG are hypothesized to greatly reduce what must be learned on the basis of linguistic exposure, relegating this to a finite number of options, or parameter settings. The idea is that exposure to some of the sentences of a language should be enough to allow the learner to identify the correct parameter settings for her language. Specification of just one parameter is held to have large ramifications for whole clusters of constructions within a grammar. The variation among all natural language and acquisition grammars can productively be characterized as differences in parameter settings, and hypotheses regarding the influence of the native language on the second language grammar can be scrutinized precisely in terms of contrasts among their parameter settings.

It was proposed by Borer (1984) and others that the most significant locus of parametric variation lay in the inflectional component of grammar, understood today as arising from the feature specification of functional categories. Many of the details of what is universal vs. what is language specific have been elaborated in these terms using data from a variety of world languages (see Chomsky 1995

for an overview) and numerous experiments in the fields of first and second language acquisition have been carried out to test these proposals empirically (see Lust et al 1994a, Thomas 1998 for respective reviews).

One coherent strand of experimental work on the acquisition of functional specifications relevant to verbal inflection has progressed systematically in the past twenty years from a focus subject agreement (e.g. in L1 English and Italian, Hyams 1986 and in L2 Spanish, Liceras 1989, Hilles 1991, Lakshmanan 1994) to direct object agreement (e.g. in L1 Dutch and Italian, Schaeffer 1997, L1 French, Hamann et al 1996, and in L2 Spanish, Sánchez 1997b and L2 French, White 1996) and finally to non-direct object agreement (e.g. in L2 Spanish, Montrul 1999, Bruhn de Garavito 2000.) The previous examples are by no means exhaustive. The current study is intended to contribute to the discussion of the non-direct object end of the agreement spectrum, particularly in light of recent illumination of the structure of dative clitic constructions in standard Spanish by Masullo (1992), Demonte (1995), Romero (1997), Torrego (1998) and Zubizarreta (1998, 1999).

In this dissertation I test two controversial hypotheses regarding the second language acquisition of functional elements in Spanish by children who speak Quechua. First, I test the hypothesis that child second language (L2) acquisition of

Spanish is inherently similar to the monolingual acquisition Spanish and of other languages whose development is attested in the literature, in that developmental grammars conform to the principles of Universal Grammar. Alternatively, children acquiring an L2 could simply attend to the surface properties of utterances, and acquisition would progress according to surface complexity. I believe that the UG hypothesis offers significant advantages over the alternative; not only is it empirically a more accurate account, as a growing literature indicates, but also it allows researchers to capitalize on the fundamental unity of diverse language-related phenomena to refine their hypotheses; syntactic theory is thus held accountable to the facts of second language acquisition as well as first language acquisition and language variation.

Under the assumption that the population studied here has access to the principles of UG, I will bring their comprehension data to bear on an issue which is of current interest in the study of child monolingual acquisition. The issue concerns a tendency for children to perform better on tasks requiring the interpretation of reflexive pronominal elements than on non-reflexive pronominal elements roughly between the ages of 5 and 10 years old. I will investigate whether this tendency manifests itself in the acquisition of Spanish dative clitics, and why, or why not. The tendency has recently been called "the Delayed Principle B Effect" (Baauw, Philip and Escobar 1997, Baauw 1999); I will refer to it in this

dissertation by the more neutral name "reflexive privilege," and although the controversy regarding this tendency will not be dispensed with altogether, these data will provide important insight into its nature.

The second question I will investigate concerns the role of abstract functional feature transfer from L1 to the L2 grammar. Among researchers who accept the theory that UG constrains second language acquisition, there is no consensus as to the role played by L1 functional feature specifications at various stages of L2 development. Compelling arguments have been advanced to the effect that L1 functional feature specifications determine the initial state of L2 (Schwartz and Sprouse 1996). Alternatively, it could be true that L1 functional features do not play a determinant role in the early stages of L2 acquisition (Epstein, Flynn and Martohardjono 1996, Eubank 1993a, 1993b, 1996). The majority of these arguments have been investigated with regard to adult second language acquisition, often with English as the target of acquisition. In this dissertation I expand the discussion along two empirical dimensions by examining the L2 acquisition of children, rather than adults, and with the target language being Spanish, rather than English. The first language of this study's L2 learners is Southern Quechua, a non-Indo-European language, allowing for other empirical dimensions to be introduced.

This chapter will be organized as follows: in section 1.2 I will review concepts held to be part of the innately specified language faculty; in section 1.3 I will discuss hypotheses regarding the role of functional feature transfer in L2; and in section 1.4 I will explain the organization of the thesis as a whole.

1.2 Linguistic Properties Attributed to Universal Grammar

The theory of Universal Grammar has been developed by numerous investigators of world languages in conjunction with a research program spearheaded since the 1950's by Noam Chomsky and summarized in Chomsky (1995). In this section I will highlight some of its guiding principles, which are essential to the analysis presented in subsequent chapters.

Within the theory of UG, a grammar is a generative device that creates strings of sound-meaning pairs which are interpreted at just two interface levels: the articulatory-perceptual level (Phonological Form, or PF) and the conceptual-intentional level (Logical Form, or LF). The condition of Full Interpretation is satisfied if a string of primitive objects is combined in a configuration that is interpretable at both interface levels. There are additional economy conditions on configured elements which ensure that a derivation is optimal; movements are supposed to be completed within in the most local domain possible, for example.

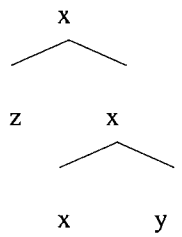
There are several operations inherent to the system: *Select*, which selects an item from the lexicon, *Merge* which concatenates two elements, and *Move feature* which moves an element with respect to other elements in the configuration. These operations apply recursively to the primitives of the system, which are feature complexes listed in the lexicon. The parameters specific to particular languages can be understood as differences among such feature complexes.

There are several types of features in these complexes, among them: categorial features, ϕ features (such as person, number, gender), Case features, phonological features, and strong categorial features such as D[eterminer], and semantic features (Chomsky 1995:277). Some of these features are interpretable at the interface level of LF and some are not. The operation *Move feature* is driven by the need to "check", or delete and erase a non-interpretable feature such as Case, before the derivation reaches the interface level of LF. The ϕ features and categorial features such as D are interpretable and thus are accessible throughout a derivation; in other words, they are not deleted or erased once checked.

A graphic system for representing the relations among sentence constituents is the X-bar theory. There are two fundamental relations elements can have with respect to one another: the head-complement relation, and the specifier-head relation. In

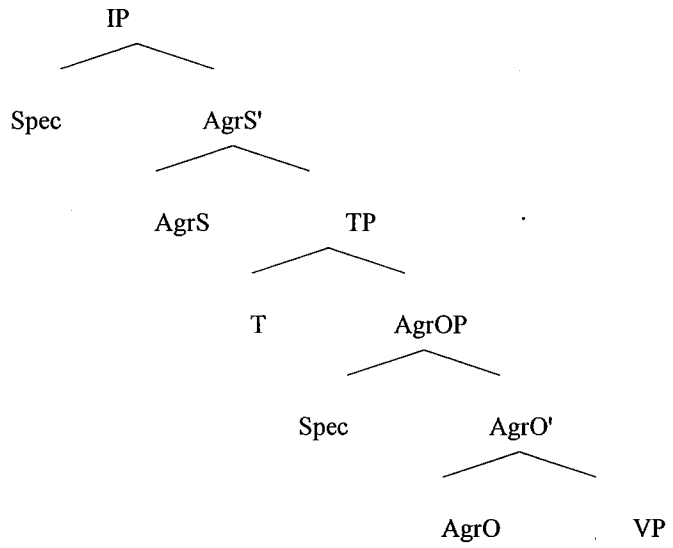
figure 1, x is a head, y is its complement, which is understood as the 'most local' relation within the configuration, and z is the specifier.

Figure 1. The Head - Specifier - Complement Relation in X-bar Terms



Of crucial importance to the analysis developed in this thesis is an understanding of how morphological agreement and Case may be understood in relation to such configurations. Morphological agreement and some instances of morphological Case are currently taken to reflect abstract structural relationships among feature clusters projected recursively according to the operations *Select, Merge* and *Move Feature*. An example of a structure postulated to underlie the inflectional phrase (IP) which has undergone these operations is found in figure 2:

Figure 2. The Abstract Structure of Inflection (Chomsky 1995:60, 120)



In this configuration, agreement is divided into two functional heads, AgrS (subject agreement) and AgrO (object agreement). Fully inflected verbs are selected from the lexicon and undergo *Head Movement* (Chomsky 1995:46-47) upwards in the structure into the positions under which its non-interpretable features can be checked, or erased. According to Chomsky (1995:174), agreement and structural Case are understood as manifestations of the Specifier-head relation (NP, Agr). Within this system, Tense raises to the Agreement head above it (Agr S), and the Verb raises to the Agreement head above it (AgrO), forming a

complex that includes the ϕ features of Agreement, and the Case feature provided by Tense,Verb.

Adding further complication (or simplification), the functional category Agreement has been eliminated as an independent entity in the theory; it has been replaced by multiple specifiers of other heads such as the Verb; the specifiers generally being labeled in lower case (Chomsky 1995:349-378). In the analysis I develop in chapters 2 and 3, I follow Demonte (1995) and Torrego (1998) in labeling what used to be known as AgrOP (Object Agreement Phrase) as either Dative Clitic Phrase, the dative preposition pP, or the more neutral fP (Functional Phrase). Resolution of this labeling ambiguity is not essential to my argument.

Notice that only some instances of morphological Case can be claimed to reflect abstract configurational relations between specifiers and heads. These are known as instances of *structural Case.* An example of a structural Case is nominative Case, which is assigned to sentential subjects by virtue of their configurational relationship to the verb. Another structural Case is accusative Case, assigned by the verb to its direct object, or sister in an X-bar configuration. Dative Case is also claimed to be a structural Case in Spanish (see Masullo 1992, Torrego 1998, among others). By contrast, there exists *inherent Case*, which is associated with thematic roles assigned by particular lexical items, usually adpositions or Case

affixes. Inherent Case is assigned by lexical heads to their complements, while structural Case is a realization of the specifier-head relation (Chomsky 1995:120).[1]

I will now turn to a discussion of how the properties of Universal Grammar can be seen to operate in the broader context of second language acquisition.

1.3 The Transfer of Functional Features

In the earlier half of the twentieth century, structuralist linguists who wrote about L2 pedagogy argued that a general process of transfer from L1 to L2 was a crucial aspect of second language acquisition (Fries 1957, Lado 1957). Nevertheless, researchers who embraced contrastive analysis as a way of predicting what aspects of the target would prove easy or problematic to second language acquirers were often incorrect in their predictions (Odlin 1989:17). I believe that this partly stems from their vantage point in time: although some contrastive analyses were carried out at the level of abstract grammatical structure, there was as yet no well-articulated understanding of the principles that underlie all of human language.

[1] Throughout the thesis I ignore the existence of *semantic Case* which has properties of both structural and inherent Case, but see van de Kerke (1996a:91-103) for discussion.

The great advantage to investigating functional feature transfer within a theory that acknowledges the constraining influence of UG should be that, to the extent that the theory of UG is an accurate characterization, one avoids the pitfall of misattributing similarities among the L1 and L2 grammar. In other words, if UG in fact constrains L2 grammars, we should expect broad similarities between L2 and L1 by virtue of the fact that they stem from the same language faculty. By the same token, the L2 grammar should share important abstract characteristics with any other natural language grammar, including ones to which the learner has never been exposed. Numerous similarities between L1 and L2 grammars come simply as a by-product of being human, if the UG hypothesis is correct.

Nevertheless, there are numerous syntactic differences among languages, and again by hypothesis the bulk of these differences stem from variation in the specification of functional categories. It therefore makes sense to limit the investigation of syntactic transfer from L1 to L2 to the arena of functional feature specification. Several logical possibilities have been entertained in the experimental literature with regard to feature transfer among adult learners; they fall roughly into three categories: the proposal that transfer is permanent, the proposal that it is absolute only in the initial stages of second language acquisition, and the proposal that it is not absolute at any stage.

I will begin with the most restrictive proposal. Hawkins and Chan (1997) and Hawkins (1998) proposed the 'Failed Features' model to account for difficulties that Chinese learners of English have with overt *wh* operator movement in L2 English, and that English learners have with gender attribution in L2 French. The basic assumption is that functional features are simply inaccessible for second language learners, leaving them effectively set permanently on the values of L1. The task of second language acquisition under this model is effectively the lexical linking of items in the target grammar with the features of the L1 rather than the features of the target, leaving some room for surface approximation of the target via substitution of different lexical items.[2] In other words, the learner with 'Failed Features' might eventually approximate the target on the surface, but will always have the L2 configured underlyingly as in L1.

A less restrictive proposal is offered by Schwartz and Sprouse (1996) in their 'Full Transfer/Full Access' model of second language learning. Under this view, the L2 is configured exactly like L1 only in the initial stages of acquisition. These

[2] Hawkins and Chan claim that Chinese-English speakers in their study give evidence that they have substituted a null pronominal *pro* for the expected trace in English restrictive relative clauses, and that *wh*-operators are not moved in their grammars, but are topics generated *in situ* in CP.

settings are not permanent. Learners are able to link the L2 lexicon to new specifications for functional categories on the basis of evidence that these are needed. If the learners have not arrived at the exact target configuration of functional categories at an advanced stage of development, proponents of this model do not assume that learners have retained their L1 feature specifications completely intact; rather they assume that new specifications may have been activated which are different both from the L1 and the target. The 'Full Transfer/Full Access' model was initially advanced to account for Turkish-German interlanguage phenomena concerning verb placement and nominative Case.

Finally, there are a number of researchers who have argued that functional feature transfer from L1 does not play an initial or primary role in acquisition at all. This view is held by at least three groups of researchers who offer models which differ greatly from one to another, as indicated in the open commentary section of Epstein, Flynn and Martohardjono (1996).

Epstein, Flynn and Martohardjono (1996) argue that UG alone restricts the configuration of the second language grammar, and that children and adult learners are able to configure L2 functional categories without regard to their specification in L1. They base this on results of tests of constructions related to

the English Inflectional Phrase and Complementizer Phrase, administered to Japanese learners of English. According to the authors, their results indicated that at an early stage of acquisition, children and adults were able to produce sentences mediated by functional structure not instantiated in their first language.

Other work advanced by Eubank (1993a, 1993b, 1996) suggests that functional categories themselves transfer from L1 to L2 with feature specifications inert. This model was developed to account for apparent optionality of L1-like performance on properties such as verb placement with regard to adverbs and negation in the L2 English of French speakers. It was also extended to account for the verb placement and negation in the L2 English of German speakers. Eubank's model was developed around the time that an optional infinitive stage was being proposed for monolingual acquisition of early German by Poeppel and Wexler (1993).

The third body of work suggesting that absolute transfer of functional category specifications cannot hold was proposed as the 'Minimal Trees' model by Vainikka and Young-Scholten (1991, 1994, 1996, 1998). Vainikka and Young-Scholten held that UG constrains L2 development, but that only lexical categories and their linear order transfers from L1. Functional categories develop gradually in the grammar, consistent with the gradual development proposed for

monolingual children by Radford (1990). Vainikka and Young-Scholten studied longitudinal spontaneous production data from monolingual German children, and Korean, Turkish, Italian and Spanish adults learning German as a second language. The position of verbs with relation to other elements was central to their argument.

1.4 Transfer in Child Second Language Acquisition

Lakshmanan (1994, 1995) argues that child second language acquirers offer special insight into the acquisition process because child acquirers are old enough to avoid the limiting influence of non-linguistic maturation factors experienced in monolingual acquisition, and young enough to avoid critical period effects experienced by adult second language acquirers. The notion that UG principles might not be available to child second language acquirers cannot be taken seriously, she claims, due to their frequent native-like attainment (1994:19). This fact makes the Failed Features hypothesis irrelevant to the study of child L2 acquisition. Thus, the only transfer hypothesis that will be entertained here is the notion that L1 features define the L2 grammar in its initial stages.

1.5 Isolating the Factors Which Influence Child Second Language Acquisition

In this section I will engage in a thought-experiment: suppose we were able to devise a test of an L2 learner's ability to correctly interpret a sentence based solely on the properties of their knowledge of the functional feature specification of a particular lexical item. Now, suppose that it could be determined for independent reasons that the learner's first language matched the target in the lexical item's functional feature specification, but that the item were phonologically null in the first language.

Presumably, if the learner were able to correctly interpret the sentence, then the learner would have either acquired the abstract feature specification via access to the open parameters of UG, or she would have transferred the abstract specification from L1. Under this scenario, one could not claim that the learner had merely translated the surface properties of L1 to L2, for there was no surface correlate of the lexical item in L1.

Suppose further that the imaginary test included interpretation of another sentence, except that this sentence entailed a mismatch in functional feature specification between the L1 and target. If the two test sentences were nearly identical in structure, then we could compare the learner's interpretation of them

to measure the influence of L1 feature specification on the interlanguage grammar. Superior ability to interpret the matched sentence vs. the mismatched sentence at an early stage of development would constitute evidence that L1 feature specifications had transferred to the initial state of the interlanguage. On the other hand, equivalent or inferior ability at an early stage to interpret the matched sentence would suggest that functional feature transfer does not play a primary role in acquisition.

Finally, suppose that the matched and unmatched sentences presented in the test were to fall into one class of utterances which has been widely studied in the monolingual acquisition literature, and that these could be contrasted with another class of utterances, also widely studied. In this way, the L2 learners' developmental patterns could be compared with attested monolingual development.

We would then have accomplished some progress in measuring the influence of various factors purported to shape second language acquisition: surface and abstract properties of the L1 and target, and more general universal constraints. This idealized thought-experiment is precisely the one whose implementation I describe in the later chapters of the dissertation.

1.6 Organization of the Thesis

It is my hope that this inquiry will be of value not only to linguists involved in theoretical debate, but also to persons concerned with the characterization of Quechua grammar, Andean Spanish grammar, and Spanish language acquisition.

In the first two chapters, I develop a contrastive analysis of the underlying structure of Quechua and Spanish, with special attention to Case alternations and functional feature specification. To my knowledge, this is the first time Quechua possessor object agreement has been discussed in terms of its participation in a larger body of Case alternations and with relation to secondary predication phenomena.

In the fourth and fifth chapters I conduct a literature review of first and second language acquisition of dative and reflexive pronominal clitics in Spanish. I discuss cross-linguistic evidence of adherence to UG binding conditions from monolingual Spanish, Dutch and English acquisition studies that will be brought to bear later on my own experimental results. I review the L2 Quechua-Spanish literature on novel clitic doubling in the possessor and locative contexts, and present the residual questions that motivate my study.

In the sixth, seventh and eighth chapters I present the design and results of a cross-sectional study of 100 Bolivian schoolchildren at various stages of acquisition of monolingual and L2 Quechua-Spanish. A picture selection and elicited production task was specifically designed to test these children's developing knowledge of the functional specification of dative and reflexive locative and possessive pronominal clitics in Spanish, in alternation with sentences involving no clitic. I will bring the statistical analysis of correct scores and error scores, as well as observations on various production errors, to bear on explanatory hypotheses of second language acquisition. Conclusions and remaining questions appear in chapter nine.

2 The Morpho-syntax of Spanish Secondary Predicates

2.1 The Dative Alternation in Spanish

In Spanish, arguments of a secondary predicate can either stand on their own, or be doubled by a dative clitic. Masullo (1992) observed that dative clitic constructions appear in complementary distribution with sentences in which a preposition capable of assigning inherent Case is present. Dative clitics in Spanish have been treated as having features needing to be checked under a functional agreement head in work by a variety of syntacticians, including Suñer (1988), Masullo (1992), Franco (1993), Demonte (1995) Romero (1997) Torrego (1998), Zubizarreta (1998) and Bruhn de Garavito (2000). To my knowledge, Masullo was the first to attempt a unified analysis of dative clitic constructions in terms of a preposition incorporation process (1992:17-27). I have adapted the following examples from among those he presents for dative objects bearing a [benefactive], [source] and [locative] thematic role, respectively:

(1) a. Le compré un regalo a María BENEFACTIVE
3DAT-bought.1SUBJ a gift to Mary
'I bought Mary a gift'

b. Compré un regalo para María
bought.1SUBJ a gift for Mary
'I bought a gift for Mary'

c. * Le compré un regalo para María
3DAT-bought.1SUBJ a gift for Mary
'I bought a gift for Mary'

d. * Compré un regalo a María
bought.1SUBJ a gift to Mary
'I bought Mary a gift'

(2) a. Le exigió una explicación al empleado SOURCE
3DAT-demanded.3SUBJ an explanation to the employee
'He demanded an explanation of the employee'

b. Exigió una explicación del empleado
demanded.3SUBJ an explanation from the employee
'He demanded an explanation from the employee'

c. * Le exigió una explicación del empleado
3DAT-demanded.3SUBJ an explanation from the employee
'He demanded an explanation from the employee'

d. * Exigió una explicación al empleado
demanded.3SUBJ an explanation to the employee
'He demanded an explanation of the employee'

(3) a. María le puso azucar al café LOCATIVE
María 3DAT-put.3SUBJ to the coffee
'María put sugar in the coffee (María sweetened the coffee)'

b. María puso azucar en el café
María put.3SUBJ sugar in the coffee
'María put sugar in the coffee'

c. * María le puso azucar en el café
María 3DAT-put.3SUBJ in the coffee
'María put sugar in the coffee'

d. * María puso azucar al café
María put.3SUBJ sugar to the coffee
'María put sugar in the coffee (María sweetened the coffee)'

Masullo's analysis is that in sentences containing a dative clitic, as in the (a) sentences above, the dative object has been generated as the argument of a null preposition which incorporates into the verb. According to Masullo, the clitic is analyzed as an agreement morpheme on the verb which signals that the dative argument has undergone structural Case assignment within the verb phrase. If the clitic is absent, as in the (d) sentences above, the dative object has remained *in situ* with a more local Case assigner, and thus the dative object is not interpreted as an internal argument of the verb. The preposition *a* in (d) is analyzed as a dummy element incapable of assigning inherent Case in anything but the context of a [goal] thematic object.

2.1.1 'A', The Ambivalent Structural/Inherent Case Assigner

Masullo's discussion would not be complete without examining the context in which the preposition *a* is in fact capable of assigning inherent Case. This is the context in which the non-accusative object receives the thematic role of [goal]. In Spanish, dative clitic doubling of a [goal] object is optional. Masullo attributes this fact to homophony of the overt preposition *a* assigning the inherent dative Case meaning goal, with the dummy element *a* which is the expression of the verb's structural Case. Due to this homophony, there are no structures ruled out either by the combination of the clitic with the dummy element *a*, or by the no-clitic construction in which the object is inherently Case-marked by the preposition *a*, as demonstrated by the sentences in (4):

(4) a. Juan le envió una tortuga a María
Juan 3DAT-sent a turtle to Mary
'Juan sent Mary a turtle'

b. Juan envió una tortuga a María
Juan sent.3SUBJ a turtle to Mary
'Juan sent a turtle to Mary'

One way to summarize Masullo's analysis of *a* is to claim that the Spanish lexicon contains two homophonous elements with different Case assignment properties.

This solution may at first seem stipulative, but it illustrates the robust and pervasive nature of what has come to be known in current theory as the Minimal Link Condition, a locality condition on chain formation.

It has long been noted that the possibility vs. prohibition on object person marking can be used as a diagnostic of the Case-assigning properties of adpositions and Case affixes. The Minimal Link Condition (Chomsky 1995) shows why: it effectively requires that arguments be assigned Case by the closest predicate. The formal definition, stated in terms of attraction of features toward a target which can check them, is as follows:

> K *attracts* F if F is the closest feature that can enter into a checking relation with a sublabel of K. (Chomsky 1995:297)

According to Torrego (1998), this condition bars the expression of object agreement on the verb in Spanish when the object could be assigned inherent Case by an intervening preposition or affix, as in sentence (4b). Taken together with the interpretive pattern established in examples (1-3), the fact that object agreement is expressed in sentence (4a) but not (4b) lends credence to the claim that the morpheme *a* has two distinct listings in the lexicon, one bearing an inherent Case feature, and one not.

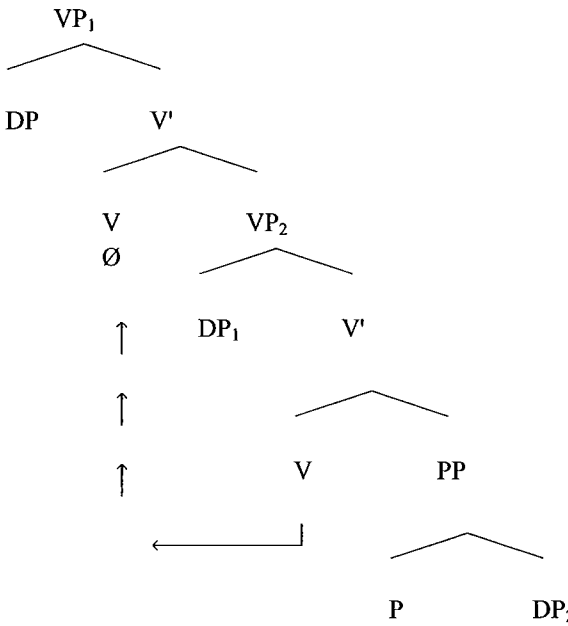
2.1.2 Minimalist Configurations of Spanish Secondary Predicates

A similar analysis for the constructions in examples (5-8) below is adopted by Demonte (1995), Romero (1997), Torrego (1998) and Bruhn de Garavito (2000). Demonte and Torrego claim that in the clitic marked sentences, the dative object is interpreted higher in the structure than the direct object, and receives an affected reading.[3] By contrast, if there is an inherent Case assigning preposition instead of a dative clitic construction, the indirect object is interpreted lower in the structure than the direct object, and does not receive an affected reading. They note that this corresponds to the classic c-command asymmetry noted for dative shift constructions in English (Larson 1988, Pesetsky 1995). I adopt the tree structure in figure 3 overleaf to account for the properties of sentences in which the non-direct object is preceded by an inherent Case-assigning preposition, based on work by Demonte (1995) and Torrego (1998):[4]

[3] Masullo achieves the same effect within a slightly different configuration.

[4] Demonte's proposed structure for dative clitic sentences differs from Torrego's in the categorial labels assigned; what Demonte calls the dative clitic phrase, Torrego calls the dative preposition phrase, which is headed by a null preposition; both phrases house a D feature in their specifiers.

Figure 3. Spanish Secondary Predicates: Overt Inherent Case-assigning Prepositions (Demonte 1995:16)

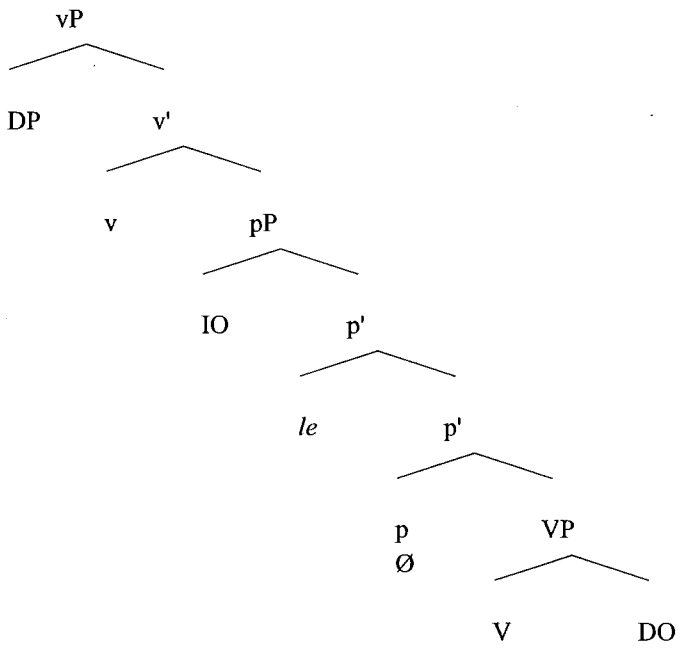


(5)	(Yo)	un regalo	compré	para	María
(6)	(El)	una exp...	exigió	de	'l empleado
(7)	(María)	azucar	puso	en	el café
(8)	(Juan)	una tortuga	envió	a	María

In the course of the derivation, the verb raises past the direct object to the highest empty verbal head, where it checks its tense and subject agreement features, yielding the surface structures given in (5-8) above.

I adopt the tree structure in figure 4, also based on work by Demonte (1995) and Torrego (1998), to account for the properties of sentences in which a dative clitic signals that the non-direct object has undergone structural Case assignment:

Figure 4. Spanish Secondary Predicates: the Null Dative Preposition (Dative Clitic Construction) (Torrego 1998:151)



(9)	(Yo)	(a María)	le	compré	un regalo
(10)	(El)	(al empleado)	le	exigió	una explicacíon
(11)	(María)	(al café)	le	puso	azucar
(12)	(Juan)	(a María)	le	envió	una tortuga

In the course of the derivation, Demonte argues that the cliticized verb and direct object have move upward as an integral unit into the empty v, yielding the surface structures given in examples (9-12) above.

These minimalist configurations derive important properties of ditransitive constructions within a single analysis, with interpretational differences attributed to the Case assigning properties of the predicate which selects the non-direct object. Within the minimalist proposals, there is a strong D feature in the specifier position of the null dative preposition, which is needed in order to check the D feature of a verb inflected with the dative clitic. The location of the dative object above the verb insures that it will have an affected interpretation (Demonte 1995, Torrego 1998).

In the absence of the null dative preposition, the dative object must receive Case from a local Case assigner, as noted by Masullo. Within the minimalist program, this effect is ensured by the Minimal Link Condition on chains, barring the movement of the dative object upward into the verb phrase because it has a more local Case assigner available than the verb.

2.2 Semantic Restrictions on the Spanish Dative Locative Construction

Romero (1997:180-184) notes that structurally Case-marked locatives in Spanish are semantically restricted. The generalization he makes is that the object must be affected, and that very often there is a part/whole relationship between the DO/IO. The affected interpretation of the object is argued to follow naturally from head

movement of object person features into the verb phrase. I will illustrate this with the following examples; judgments from Romero (p.c.):

(13) a. María le puso un mantel a la mesa LOCATIVE
María 3DAT-put.3SUBJ a tablecloth to the table
'María put a tablecloth on the table (María covered the table)'

b. María puso un mantel en la mesa
María put.3SUBJ a tablecloth on the table
'María put a tablecloth on the table (the cloth might be folded and placed on the edge of the table)'

c. * María le puso un mantel en la mesa
María 3DAT-put.3SUBJ a tablecloth on the table
'María put a tablecloth on the table (the cloth might be folded and placed on the edge of the table)'

d. * María puso un mantel a la mesa
María put.3SUBJ a tablecloth to the table
'María put a tablecloth on the table (María covered the table)'

These sentences fit the pattern set previously regarding complementary distribution between a structural and inherent Case assigner; furthermore, the interpretational difference between (a), (b) and (c) sentences suggests that the affected or part/whole reading is exclusively available in the structural Case assignment context. This semantic restriction makes intuitive sense as a formal property of structural Case assignment; ensuring that the non-direct object can be interpreted as an internal argument of the verb only in the higher position.

2.3 Reflexive *se*

The clitic *se* in Spanish has been widely studied by Romance linguists and corresponds to a variety of types of constructions, including reflexive, reciprocal, impersonal, ergative, antipassive (see Masullo 1992 chapter 3 for an overview and discussion of these types.) None of these latter types are of interest here; I will limit my observations to straightforward dative reflexive objects. Reflexive prononimals establish co-reference between the subject and a verbal object. My aim is to demonstrate that reflexive *se* can have a common configurational basis with that proposed for dative *le* in figure 2 above, in all and only the same thematic contexts.

In Romance, reflexive clitics bear an independent theta role from the subject with which they co-refer (Aoun 1985). I will assume they require the assignment of structural Case to the object as well as the subject, since they are overt pronominal elements within the verb phrase.

I offer the following evidence for the claim that the null dative preposition can and must be involved in the configuration of non-accusative reflexive clitics: such clitics are in complementary distribution with inherent Case-assigning prepositions in the [benefactive], [source], and [locative] contexts. This is

illustrated in sentences (14-16) below, which parallels the distribution of non-reflexive dative clitics in examples (1-3) in section 2.1.

(14)

a. María se compró un regalo BENEFACTIVE
Mary 3REF-bought.3SUBJ a
'Mary bought herself a gift'

b. María compró un regalo para sí misma
bought.1SUBJ a gift for Mary
'Mary bought a gift for herself'

c. * María se compró un regalo para sí misma
3DAT-bought.1SUBJ a gift for Mary
'Mary bought a gift for herself'

d. * María compró un regalo
Mary bought.3SUBJ a gift
'Mary bought herself a gift'

(15)

a. Juan se exigió una explicación SOURCE
Juan 3REF-demanded.3SUBJ an explanation
'Juan demanded an explanation of himself'

b. Juan exigió una explicación de sí mismo
Juan demanded.3SUBJ an explanation from himself
'Juan demanded an explanation from himself'

c. * Juan se exigió una explicación de sí mismo
Juan 3REF- demanded.3SUBJ an explanation from himself
'Juan demanded an explanation from himself'

d. * Juan exigió una explicación
Juan demanded.3SUBJ an explanation
'Juan demanded an explanation of himself'

(16)

a. María se puso un poncho LOCATIVE
María 3REF-put.3SUBJ a poncho
'María put a poncho on (herself)'

b. María puso un poncho sobre sí misma
María put.3SUBJ a poncho over herself
'María put a poncho over herself'

c. * María se puso un poncho sobre sí misma
María 3REF-put.3SUBJ a poncho over herself
'María put a poncho over herself'

d. * María puso un poncho
María put.3SUBJ a poncho
'María put a poncho on (herself)'

The (d) sentences, with the exception of the locative sentence number (16d), are only grammatically well-formed sentences to the degree that the verb tolerates the lack of an indirect object, but they cannot have a reflexive reading without the clitic.

In the [goal] context the reflexive clitic is required, according to data from my informant María Teresa Pérez.

(17)

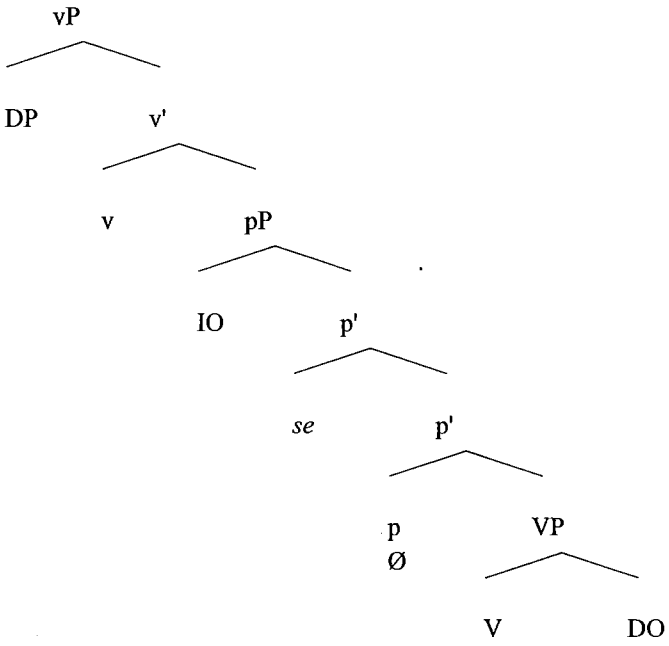
a. Juan se envió una tarjeta a sí mismo
   Juan 3REF-sent a greeting.card to himself
   'Juan sent himself a greeting card'

b. * Juan envió una tarjeta a sí mismo
   Juan sent.3SUBJ a greeting.card to himself
   'Juan sent himself a greeting card'

I will assume that reflexive clitics share the same abstract representation as dative clitics;[5] in other words, that they can only be interpreted in a structure analogous to figure 3 above, adapted for reflexives here as figure 5 overleaf:

[5] For a compatible treatment, see Romero (1997:229-241).

Figure 5. Spanish Secondary Predicates: The Null Dative Preposition (Reflexive Clitic Construction)



(18) (María) a sí misma se compró un regalo

I will conclude this section on reflexive clitics by summarizing that there is evidence for a common configurational basis with dative and reflexive clitics. In order for the sentence to be well-formed, verbs inflected with a reflexive clitic must check their non-interpretable D features in the specifier of the null dative preposition. In this position, reflexive clitics are assigned structural dative Case and a theta role by the verb. Their doubling anaphoric expressions may be dropped, or kept for emphasis or contrastive focus.

2.4 Spanish Possessor Objects and Secondary Predication

Ditransitive verbs are not the only predicates that permit the spellout of a dative clitic in Spanish. Transitive verbs may assign structural dative Case to a possessor argument as well. Once again, Masullo (1992) and Demonte (1995) offer analyses which capitalize on the similarities between the prepositional dative constructions described earlier and nominal or possessor dative constructions.

Masullo observes that possessors co-indexed with a dative clitic appear in complementary distribution with the genitive Case assigner *de* in contexts of both alienable and inalienable possession. I have adapted two of his sample sentences to show that they conform to the Case alternation pattern attributed to prepositional dative constructions above. The following judgments are Masullo's; glosses mine:

(19) a. (María) le robó el dinero a Juan ALIENABLE
María 3DAT-stole.3SUBJ the money to Juan
'Maria stole John's money'

b. (María) robó el dinero de Juan
María stole.3SUBJ the money from Juan
'Maria stole the money from Juan'

c. * (María) le robó el dinero de Juan
María 3DAT-stole.3SUBJ the money from Juan
'Maria stole John's money'

d. * (María) robó el dinero a Juan
María stole.3SUBJ the money to Juan
'Maria stole John's money'

(20) a. (Roberto) le pisó la cola al gato INALIENABLE
Robert 3DAT stepped.on.3SUBJ the tail to the cat
'Robert stepped on the cat's tail'

b. (Roberto) pisó la cola del gato
'Roberto stepped on the tail of the cat'

c. * (Roberto) le pisó la cola del gato
Robert 3DAT stepped.on.3SUBJ the tail of the cat
'Robert stepped on the cat's tail'

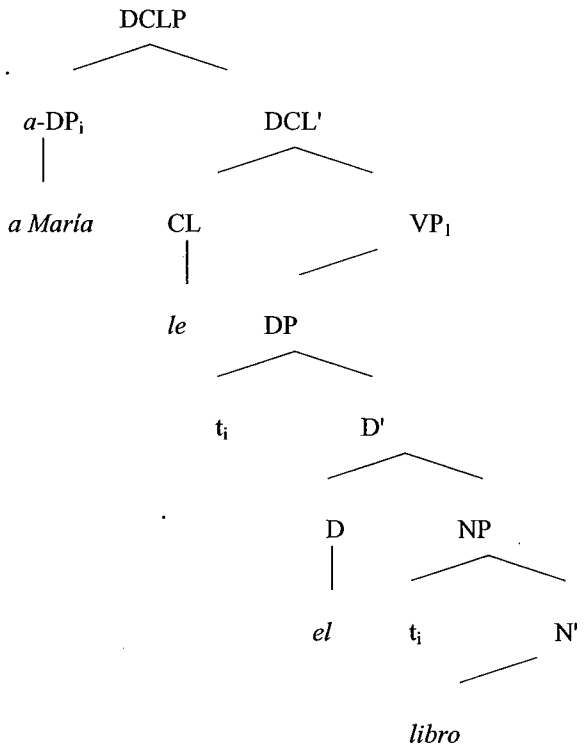
d. * (Roberto) pisó la cola al gato
'Roberto stepped on the tail to the cat'

Demonte (1995) notes that the sentences in which the possessor dative clitic appears, the possessor has an affected interpretation. She also notes that Case-marking by *de* is unavailable for inalienable possessions.

Based on the above observations, I adopt the following analysis for the two types of Spanish possessive constructions: when the possessor is unraised and Case-marked genitive, it is assigned inherent Case the by genitive preposition *de.* When the possessor is not Case-marked genitive, it must raise to receive structural dative Case, and it will be interpreted as an affected (internal) argument of the

verb. Demonte proposed the following partial tree structure for possessor dative constructions:

Figure 6. The Spanish Possessor Dative Construction (based on Demonte 1995:26)



Under Demonte's analysis, the possessor argument in figure 6 needs to raise via head movement into the dative clitic phrase in order to be assigned Case, when the genitive Case-marker is not present.

2.5 Summary

In this chapter, I have given evidence that there is a Case alternation in Spanish known as the dative alternation, which is attributable to the formal feature specification of just one functional element in the Spanish lexicon: the null dative preposition, and to the Case assigning properties of overt Spanish prepositions. These values, together with the feature values of the object clitic paradigm, are what needs to be learned by the child acquiring Spanish as a first or second language in order to comprehend and produce reflexive and oblique dative locative and possessive sentences of the types discussed here. In chapter 3 I will offer a contrastive analysis of the same sentence types in Quechua, and give a detailed account of the functional, Case-assigning and morpho-syntactic specification of each language as linked to the lexical items they instantiate.

3 Contrastive Analysis of Secondary Predication in Spanish and Southern Quechua

3.1 Introduction

I this chapter I begin with a historical and typological overview of Southern Quechua. I will then demonstrate abstract configurational commonalities between Quechua and Spanish in terms of the instantiation of non-direct object agreement. Structural similarities between the two languages have been obscured because of contrasts in their lexicons and morphology, in particular: a contrast in the overt phonological realization of third person object agreement, a contrast in the fusion of object agreement with other functional categories, and a contrast in Case and agreement contingencies. These claims are developed in sections 3.3-3.7. In section 3.8 I summarize the structural commonalities and contrasts, offering at the end a table of dative locative and possessive constructions which exemplify them.

3.2 Historical and Linguistic Overview

Quechua, the language of the Inca empire, was spread as a lingua franca from Cuzco, Peru northward as far as southern Colombia and southward to Chile and parts of Argentina starting with the first half of the 15th century. The Spanish conquest served to consolidate and extend the use of Quechua over other

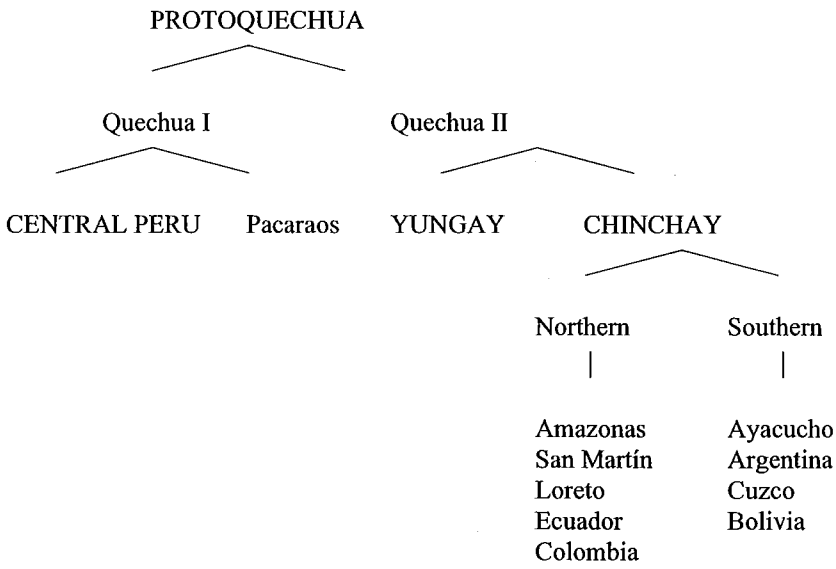
indigenous languages in that vast area, although some other indigenous languages, notably Aymara in the Bolivian highlands, have persisted to modern times alongside Quechua and Spanish. Quechua currently constitutes the largest indigenous language family spoken in the Americas, having approximately eight and a half million speakers, divided into two mutually unintelligible branches. In this dissertation, 'Southern Quechua' and 'Quechua' are generally used to refer to the Bolivian, Cuzco and Ayacucho dialects, a group of languages distinct from those spoken in Ecuador and Colombia, though all occupy the Quechua II branch of the family tree.

Discussions of Quechua's complex history are available in Campbell (1997), Parker (1969), and Cerrón-Palomino (1987), from the latter of which I adapt figure 7 overleaf; (detail has been omitted).

The most closely related languages to Southern Quechua include the other Quechua II languages, including Ecuadorian Quechua, of which several well developed analyses are available (Cole 1982, Hermon 1985, Muysken 1977). However, the object inflection properties of Ecuadorian varieties differ

substantially from those of Southern Quechua[6] and thus claims about their grammars must be not conflated with respect to the topic of this thesis.

Figure 7. Southern Quechua in Relation to the Quechua Language Family



In terms of major typological distinctions between Southern Quechua and Spanish, Quechua is a left branching or SOV language with free word order within main clauses (Lefebvre and Muysken, 1988:12) while Spanish is a right branching VO language with word order subject to topic-focus structure (Zubizarreta 1998). One way to understand the major differences between these

[6] Object person marking in Ecuadorian Quechua is optional and only overt in the first person.

two languages is by comparing the processes they employ to make argument structure visible in the sense of Baker (1996). Isolating languages have little inflectional or derivational morphology and tend to be head initial; Case-marking languages tend to be head final, while agreement marking languages often display free word order. A summary of typological distinctions is offered in table 1 below:

Table 1. Spanish and Quechua as Language Types

	I	II	III
Morphological type	Isolating	Dependent marking	Head marking
Word order	Head initial	Head final	Free
Exemplar	English *Spanish*	Japanese *Quechua*	Mohawk *Spanish* *Quechua*

Within this typology, Quechua makes extensive use of both Case and agreement marking, displaying both head final and free word order properties, while Spanish makes use of isolating properties as well as agreement marking, alternating between head initial and free word order. Agreement marking can therefore be considered a common denominator between these two typologically distinct languages, while Case marking is predicted to be the locus of divergent properties. The dative clitic system of Spanish fuses Case and agreement in one set of morphemes, making it especially important to tease apart what the two

languages share and what makes them different in terms of Case and agreement marking.

3.3 Overview of Morphological Contrasts in Non-accusative Object Marking in Spanish and Quechua

There are a number of contrasts among the lexical inventories of the Spanish and Quechua verbal object person and Case markers, and neither language falls consistently into a neat subset relation with the other. In this section I will focus on lexical contrasts which might impact on the interpretation of dative clitics in L2 Quechua-Spanish if feature transfer plays any role in interpretation. The types of lexical contrast which I will address here are the following: 1) contrasts in the properties of object person markers, and 2) contrasts among the other morphemes with which Spanish object person markers are morphologically fused, especially the Case markers.

In tables 2 and 3 overleaf, the object person paradigms are presented for comparison with each other. I have bolded the third person morphemes in each chart.

Table 2. Standard Latin American Spanish Object Clitics (Harris 1994)

		3 person		2 person		1 person	
		m	**f**	m	f	m	f
ACC	SG	**lo**	**la**	te		me	
	PL	**los**	**las**	les		nos	
DAT	SG	**le**		te		me	
	PL	**les**		les		nos	
REF	SG			te		me	
		se					
	PL			les		nos	

The first contrast tables 2 and 3 illustrate is the fact that Spanish has a distinct overt clitic to mark third person objects, while Quechua third person marking is non-overt; see below:

Table 3. Southern Quechua Object Person and Reflexive Affixes (van de Kerke 1996a)

4 person	**3 person**	2 person [1>2]	2 person [3>2]	1 person
- Ø	**- Ø**	-yki	-sunki	-wa
'you and me'	**'him/her'**	'I to you'	'he/she to you'	'me'

Spanish fuses person with number and Case, as well as gender if Case is accusative, while Quechua maintains analytic person, number and Case markers. Fusion is not unique to Spanish, however. Quechua fuses the second person object

marker with the first or third person subject agreement marker. Quechua has a distinct person marker for fourth person (first person plural inclusive of the interlocutor), but fourth person marking is not instantiated in Spanish.

Grammatical gender is not instantiated in Quechua. This is not of immediate import to non-accusative constructions in Spanish, since only accusative constructions are inflected for gender.

Number and Case are expressed in a separate morphemes which are not adjacent to object person markers in Quechua; they are presented in tables 4 and 5 below:

Table 4. Southern Quechua Object Number (van de Kerke 1996a)

[+2 person, PL]	[-2 person, PL]
-chis 'you'	-ku 'us/them'

Table 5. Southern Quechua Object Case Affixes (partial list, excerpted from LeFebvre and Muysken 1988)

-ta	Accusative	ACC	'to'
-man	Dative/ Ablative	DAT and ABL	'to'
-manta	Ablative	ABL	'from'
-q/-pa	Genitive	GEN	'of'
-wan	Instrumental	INSTR	'with'
-paq	Benefactive	BEN	'for'

3.4 The Functional Structure of Secondary Predicates in Quechua

3.4.1 Sources and Informants on Southern Quechua

Studies of the phrase structure of Southern Quechua consulted for this work consist of the following: Bills (1972, 1975) with extended sections on object Case and agreement marking in the Cochabamba and Oruro Bolivian dialects, Cusihuaman (1976) a native-speaker grammar of the Cuzco dialect, Lastra (1968) a descriptive grammar of the Cochabamba dialect, LeFebvre and Muysken (1988) a study of nominalizions in the Cuzco dialect within the Principles and Parameters theory of grammar, Muysken (1989, 1994) studies of agreement and predication chains in the Cuzco dialect, Parker (1969) a descriptive grammar of the Ayacucho dialect, Plaza Martínez (1987) a study of pronominal object marking in the Norte de Potosí Bolivian dialect, Sánchez (1996) a contrastive analysis of nominals in Spanish and Southern Quechua, and van de Kerke (1996a, 1996b) studies of affix order and interpretation in Bolivian Quechua. In addition, I have consulted the pedagogical grammars Bills, Vallejo and Troike (1969) and Soto Ruiz (1979).

In order to ensure the applicability of the generalizations made in the above grammars to the specific types of constructions discussed in this and subsequent chapters, I have elicited translations of sentences from Spanish to Quechua, which

are listed with discussion in Appendix C, and I have constructed sentences in Quechua and elicited judgments on their interpretation from the following native speakers: Pedro Plaza Martínez, (Norte de Potosí dialect) a Bolivian linguist and professor at the Universidad Mayor San Simón, Cochabamba, Bolivia; and Maria Cristina Parackáhua Arancibia, a rural teacher who majored in Quechua Language Studies at the Universidad Mayor Real Pontifícia de San Francisco Javier de Chuquisaca, Bolivia. Other sentences and judgments were provided for pilot studies by Serafín M. Coronel-Molina, a speaker of Southern Quechua as well as Wanka Quechua, and a certified U.N. translator. All of the above informants are bilingual in Quechua and Spanish. I also received commentary on many of the same sentences from Modesto Vargas Vargas and family, farmers in the Sucre region of Bolivia with limited contact to Spanish.

3.4.2 The Interpretation of Null Third Person Objects in Quechua

It has become standard for generative grammarians to assume that features denoting person, number and gender may be interpretable even when they are phonologically null (e.g. Rizzi 1986, Chomsky 1995). The existence of null third person object pronouns in Southern Quechua has been argued for independently in Plaza (1988) and Sánchez (2000). Among the evidence presented is the

possibility of a definite/specific interpretation of the null third person direct object in sentences such as (21-23):

(21) Huwan maka-**Ø**-n
Huwan hit-3OBJ-3SUBJ
'Huwan hits him/her' (Sánchez 2000)

(22) pusa-**Ø**-ni
carry-3OBJ-1SUBJ
'I carry him'

(23) riku-**Ø**-ni
see-3OBJ-1SUBJ:
'I see him/her/them' (Plaza 1988)

This is true for non-direct objects of ditransitive verbs as well, as illustrated by a judgment elicited from my informant M. Cristina Parackahua in example (24):

(24) Ana (Jusi-man) jut'a-ta chura-**Ø**-n
Ana (José-DAT) sandal-ACC put-**3OBJ**-3SUBJ
'Ana puts the sandal on him/José'

Another way to express the fact that phonologically null third person direct and non-direct objects are interpretable in Quechua is to note that a null object is able to satisfy the thematic requirements of the verbs in (21-24) above.

3.4.3 The Thematic Range of Secondary Object Marking in Quechua

Object marking will be treated here parallel to dative clitic doubling in Spanish: as an agreement process between a noun phrase and a verb phrase. All accusative objects trigger object marking on the verb in Quechua. Many but not all non-accusative objects trigger object marking. In this section I will present the contexts in which non-accusative object marking is obligatory, optional and prohibited, and I will then propose an underlying functional structure much like the one proposed for Spanish in chapter 2. All of the examples in this section are taken from Bills' (1975) discussion of agreement and underlying Case contingencies, unless otherwise marked. I have added a distinction between the surface Case-marker and the thematic role of the doubled object to Bills' examples, as well as my own morphemic glosses.[7]

[7] I have omitted Bill's presentation of ablative-reference facts because van de Kerke (1996a: 106-7) presents conflicting facts which I cannot resolve here; there is also controversy among them regarding comitatives. From the optional agreement context, I have also left out Bill's dative directional objects and purposive adjuncts as these involve additional functional structure which will be discussed in a later section regarding the directional modal suffixes; causative constructions have been left out of the discussion because they involve additional functional structure beyond the scope of this thesis.

I. Object marking is obligatory if the doubled argument is a [goal] object Case-marked dative. Examples are:[8]

(25) * ñuqa-man sara-ta qu-n = (ñuqa-man) sara-ta qu-**wa**-n
I-DAT corn-ACC give-3SUBJ I-DAT corn-ACC give-1OBJ-3SUBJ
'He gives me the corn'

(26) * ñuqa-man papa-ta bende-n = (ñuqa-man) papa-ta bende-**wa**-n
I-DAT potatoes-ACC sold-3SUBJ I-DAT potatoes-ACC sold-1OBJ-3SUBJ
'He sold the potatoes to me'

II. Object marking is prohibited if the doubled argument is a [locative] object Case-marked ablative or locative. Examples are:

(27) ñuqa-manta q'ipi-ta uq"ari-n ≠ * (ñuqa-manta) q'ipi-ta uq"ari-**wa**-n
I-ABL bundle-ACC lift.off-3SUBJ I-ABL bundle-ACC lift.off-1OBJ-3SUBJ
'He lifted the bundle off me'

(28) ñuqa-pi bola-ta saqi-n ≠ * (ñuqa-pi) bola-ta saqi-**wa**-n
I-LOC marble-ACC leave-3SUBJ I-LOC marble-ACC leave-1OBJ-3SUBJ
'He (e.g. the surgeon) left a marble in me'

[8] Legend of abbreviations: ABL=ablative case, ACC=accusative case, DAT=dative case, GEN=genitive case, OBJ=object agreement, LOC=locative case, POSS=possessive agreement, REF=reflexive, SUBJ= subject agreement, 1,2,3= first, second, third person

III. Object marking is optional if the doubled argument is a [source] object Case-marked ablative, or [locative] object Case-marked dative. Examples are:

(29) ñuqa-manta waka-ta ranti-n = (ñuqa-manta) waka-ta ranti-**wa**-n
I-ABL cow buy-3SUBJ I-ABL cow buy-1OBJ-1SUBJ
'He bought the cow from me'

(30) ñuqa-man misi-ta wata-n = (ñuqa-man) misi-ta wata-**wa**-n
I-DAT cat-ACC tie-3SUBJ I-DAT cat-ACC tie-1OBJ-3SUBJ
'He tied the cat to me'

Bills concludes from the above agreement and Case marking contingencies that

> in a grammar of Quechua we must recognize more underlying Cases than there are surface Case-markers. The dative Case-marker -man, for example, must correspond to at least two Cases, dative object and ... dative-locative, in order to account for the fact that [object person marking] obligatorily appl[ies] to the former Case...but only optionally apply to the latter. (1975:67)

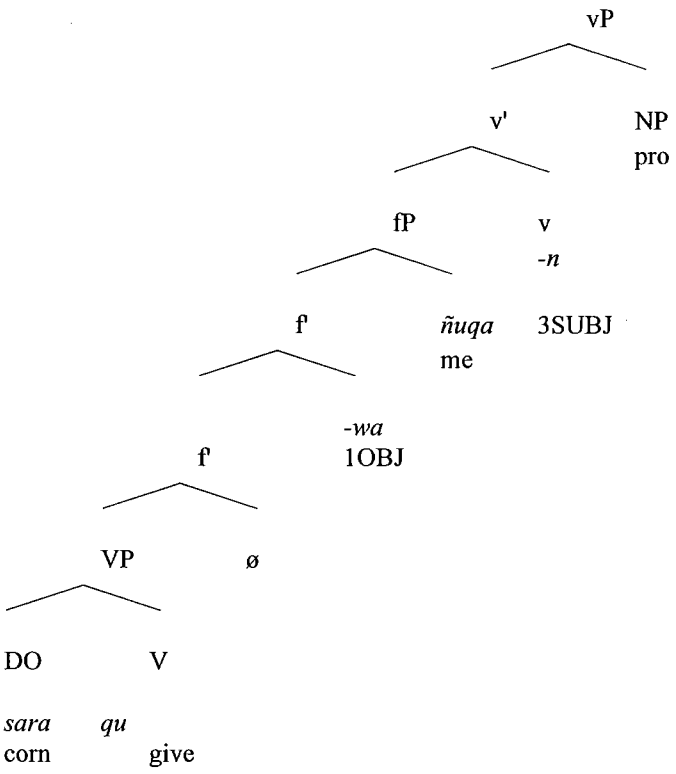
Bills then equates the possibility of a Case alternation with the dative shift phenomenon in English. This cross-linguistic equation should hint at a unified analysis along the lines proposed for Spanish.

I will argue that we can account for the split in Quechua Case/agreement contingencies in a similar way to the one I have presented for Spanish in the previous chapter. The generalization that I will make based on the examples in I, II and III is that in Quechua as in Spanish, dative Case can be assigned

structurally within VP in certain thematic contexts, among them, [goal] and [locative]. The ablative Case optionally has a similar underlying structure when the thematic role is [source]. These constructions are in complementary distribution with sentences in which an inherent Case-assigning morpheme such as locative *-pi* is present. If a [goal] or [source] argument Case-marked with *-man* or *-manta* appears without triggering object agreement, I assume that inherent Case has been assigned to the non-direct object by those affixes.

If this generalization is true, I will propose that a structure similar to that assumed for Spanish dative clitic sentences underlies the sentences in Quechua in which object agreement doubles a dative or ablative object. The proposed structure is the following:

Figure 8. Quechua Secondary Predicates: The Null Structural Case fP (Object Agreement Required)



(31) (ñuqa-man) sara-ta qu-**wa**-n
'He gives me the corn'

(32) (ñuqa-man) papa-ta bende-**wa**-n
'He sold the potatoes to me'

(33) (ñuqa-manta) waka-ta ranti-**wa**-n
'He bought the cow from me'

(34) (ñuqa-man) misi-ta wata-**wa**-n
'He tied the cat to me'

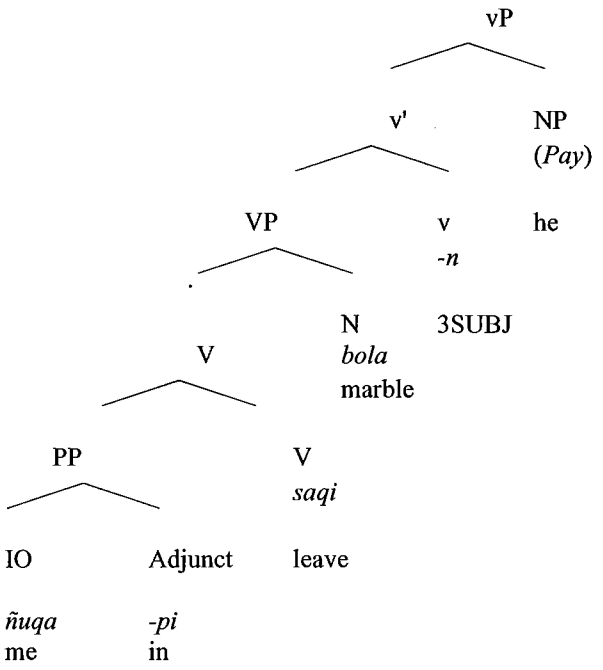
Sentences (31-34) are derived from the underlying structure in figure 8 above.

The structure resembles figure 4 proposed for Spanish, but with branching direction reversed. Derivation is just as in Spanish: the verb moves upward through the tree to check its person features in the functional categories where object and subject agreement are respectively checked.

Just as in Spanish, the object person feature of the inflected verb is checked in the specifier position of a functional phrase with a phonologically null head, and due to universal properties of grammar, its location within the VP shell assures that it will have an affected interpretation (Hale and Keyser 1993).

Now I will discuss the structures in which agreement with a non-accusative object is not present. In Spanish, it was argued that a configurational difference underlies this distinction. I will propose that Southern Quechua might configure postpositional phrases in a similar way to that proposed for Spanish in the previous chapter. The Quechua configuration is presented here in figure 9:

Figure 9. Quechua Secondary Predicates: The Inherent Case-assigner (Object Agreement Prohibited)



(35) ñuqa-pi bola-ta saqi-n
'He (e.g. the surgeon) left a marble in me'

In the above configuration, the indirect object gets its Case checked *in situ* by the affix *-pi*, and so it has no need to move higher in the phrase structure.

I will assume that sentences (36-38) below can be interpreted under the same configuration as (35) in figure 10, meaning that dative *-man* and ablative *-manta* can optionally be adjuncts that assign inherent Case just as locative *-pi* can.

(36) ñuqa-manta q'ipi-ta uq"ari-n
'He lifted the bundle off me'

(37) ñuqa-manta waka-ta ranti-n
'He bought the cow from me'

(38) ñuqa-man misi-ta wata-n
'He tied the cat to me'

To summarize these observations about the Case alternation in Quechua: it is possible to generate two types of ditransitive structure in Quechua; one in which the direct object is higher in the tree than the non-direct object, and one in which the non-direct object is higher. The higher object is the target for object agreement on the verb because it is interpreted within VP ; due to its position it receives affected interpretation. If an object is generated as the complement of an adjunct, it will not be attracted to move upward in the tree, and will therefore not receive these interpretations.

3.5 Special Properties of Structurally Case-marked Locatives in Quechua

In chapter 2 section 2 I presented arguments by Romero (1997:180-184) that structurally Case-marked locatives in Spanish are semantically restricted. The generalization he makes is that the object must be affected, and that very often there is a part/whole relationship between the DO/IO. I have pointed out that the

affected interpretation of the object has been argued to follow naturally from head movement of object person features into the verb phrase in Spanish and Quechua. Romero's examples for Spanish all involve a third person object.

It is difficult to determine whether Quechua follows the same pattern of semantic restriction, because object agreement is only visible and discrete from other affixes in the first person. A first person human location is much harder to construe than a third person inanimate location; likewise, a first person part/whole relationship which may be considered a location is even harder to find, with the exception perhaps of medical or obscene contexts.

Nevertheless, I have found one footnote in Bills which suggests that structurally Case-marked dative locatives (i.e. locatives which trigger object person agreement on the verb) have an affected reading, and that inherently Case-marked locatives do not.

Bills (1975:124) notes the following alternation in meaning which is linked to whether there is object marking with a dative locative or not:

(39) (ñuqa-man) lliklla-ta chura-wa-n
me-DAT shawl-ACC put-1OBJ-3SUBJ
'He put the shawl on me'

(40) (ñuqa-man) lliklla-ta chura-n
me-DAT shawl-ACC put-3SUBJ
'He placed the shawl on me'

According to Bills, sentence (39) is ambiguous; it can mean that the shawl was placed on me, or that I was robed in the shawl. He claims that when the verb *churay* 'put' displays object agreement, it may optionally undergo a meaning change to 'dress, put on (clothes)'. In other words, object agreement makes possible and affected interpretation of the non-direct object: the person is now in a semi-permanent state of wearing the shawl rather than having it placed upon his surface.

I suggest that this is evidence[9] for the configurational properties proposed in the previous section, instantiated within the restricted environments in which an inanimate locative object can participate in the dative alternation.

Now I will discuss the fact that a locative argument Case-marked by ablative *-manta* is prohibited from agreeing with the verb. Could this stem from a semantic

[9] More examples with different verbs should provide additional evidence; these are currently unavailable to me.

restriction, or is it simply a lexical idiosyncracy? Recall that object agreement is optional with the ablative Case-marker when the theta role assigned is [source]:

(41) ñuqa-manta waka-ta ranti-n = (ñuqa-manta) waka-ta ranti-**wa**-n
I-ABL cow buy-3SUBJ I-ABL cow buy-1OBJ-1SUBJ
'He bought the cow from me'

My proposed interpretation of the agreeing sentence is that through the sale of the cow, the first person object is affected in a way that is not signaled without object agreement. This distinction in affectedness may be as fleeting as the distinction in affectedness between 'Mary sold the book to me' and 'Mary sold me the book' in English.

In Quechua, object agreement is prohibited with the ablative Case-marker when the theta role assigned is [locative] not [source], according to Bills:

(42) ñuqa-manta q'ipi-ta uq"ari-n ≠ * (ñuqa-manta) q'ipi-ta uq"ari-**wa**-n
I-ABL bundle-ACC lift.off-3SUBJ I-ABL bundle-ACC lift.off-1OBJ-3SUBJ
'He lifted the bundle off me'

but agreement is optional for locatives when the Case-marker is dative:

(43) ñuqa-man q'ipi-ta chura-n = (ñuqa-man) q'ipi-ta chura-**wa**-n
I-ABL bundle-ACC put-3SUBJ I-ABL bundle-ACC put.on-1OBJ-3SUBJ
'He put the bundle on me'

I observe that the affected meaning of 'unburdening' seems to be unavailable with the verb *uq"ari* 'to lift'. In other words, it seems impossible to form the interpretation that through the lifting of the bundle, the object has undergone a change of state and is now unburdened. It is difficult to imagine what semantic principles might have ruled this out; therefore I will suggest that it is simply a lexical idiosyncracy of the Case affix *-manta*. More data are needed see how systematic is the prohibition on [locative] object agreement with an ablative Case marker.

To conclude this section, I have proposed that there are two structural Case-markers which may co-occur with an object that is theta marked [locative]. These Case-markers are dative *-man* and ablative *-manta*. I have noted Romero's claim that there is a semantic restriction on what types of arguments may enter into a structurally Case-marked relation: the DO and IO may have a part/whole relationship, and the IO must have an affected interpretation. Because of the lack of overt third person object marking in Quechua, I have argued that it is difficult to investigate these semantic restrictions. Nevertheless, there appears to be evidence that the presence of object agreement is correlated with the possibility of an affected interpretation, which would be a natural consequence of the proposed underlying configuration.

3.6 Quechua Reflexive Object Marking and Case Contingencies

Just as I argued in chapter 2 section 3 on Spanish dative reflexives, I will argue here that there exists in Quechua a class of reflexive non-accusative objects which participates in a Case alternation identical to its non-reflexive counterparts. I will limit my observations to straightforward reflexive objects which I define as pronominals that establish co-reference between the subject and a verbal object. My aim is to demonstrate that sentences involving reflexive *-ku* can have a common configurational basis with that proposed for object person *-wa* in figure (8) above, in all and only the same thematic contexts. The difference here is that *-ku* is devoid of person features. Nevertheless, I will claim it has a non-interpretable formal feature which needs to be checked in the same functional projection that checks the object person features of an inflected verb.

In Quechua as in Romance, reflexive affixes bear an independent theta role from the subject with which they co-refer (van de Kerke 1996a:160, Aoun 1985). For example, if we assume that *churay* (to put) in (48) below is a ditransitive verb, the reflexive affix *-ku* bears a [patient] theta role and is coindexed with the [agent] *Ana*:

(44) Ana jut'a-ta chura-**ku**-n
Ana sandal-ACC put-**REF**-3SUBJ
'Ana puts the sandal on herself'

I will assume that reflexive affixes require the assignment of objective as well as nominative Case, one Case per theta role. In Quechua, reflexive affixes obligatorily trigger the expression of subject agreement on the verb; object agreement does not appear.

I offer the following evidence for the claim that a null functional category can and must be involved in the configuration underlying non-accusative reflexive affixes: such affixes are in complementary distribution with inherent Case-assigning prepositions in the [benefactive], [source], and [locative] contexts. This is illustrated in sentences (45-47) below, and parallels the distribution of object person markers presented earlier in the chapter.

I. Reflexivization is obligatory if the subject co-refers with a dative object. I note that the subject/object, if expressed, must appear in dative Case. Examples are:

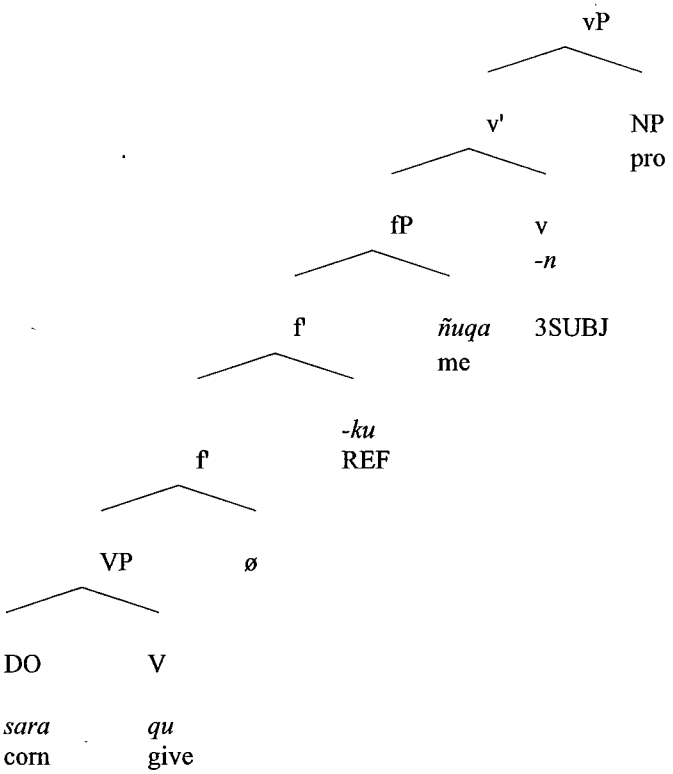
(45) * ñuqa-man parla-ni = (ñuqa-man) parla-**ku**-ni
I-DAT talk-1SUBJ I-DAT talk-REF-1SUBJ
'I talk to myself'

(46) * ñuqa-man sara-ta qu-ni = (ñuqa-man) sara-ta qu-**ku**-ni
I-DAT corn-ACC give-1SUBJ I-DAT corn-ACC give-REF-1SUBJ
'I give myself the corn'

(47) * ñuqa-man papa-ta bende-ni = (ñuqa-man) papa-ta bende-**ku**-ni
I-DAT potatoes-ACC sold-1SUBJ I-DAT potatoes-ACC sold-REF 1SUBJ
'I sold the potatoes to myself'

I propose that the well-formed reflexive sentences in (45-47) can be interpreted under the following configuration in figure 10, similar to that in figure 8 above:

Figure 10. Quechua Secondary Predicates: The Null Structural Case FP (Reflexive Marking Required)



II. Reflexivization is optional if agreeing with an ablative object, or dative locative object. Examples are:

(48) ñuqa-manta waka-ta ranti-ni = (ñuqa-manta) waka-ta ranti-**ku**-ni
I-ABL cow buy-1SUBJ I-ABL cow buy-REF-1SUBJ
'I bought the cow from myself'

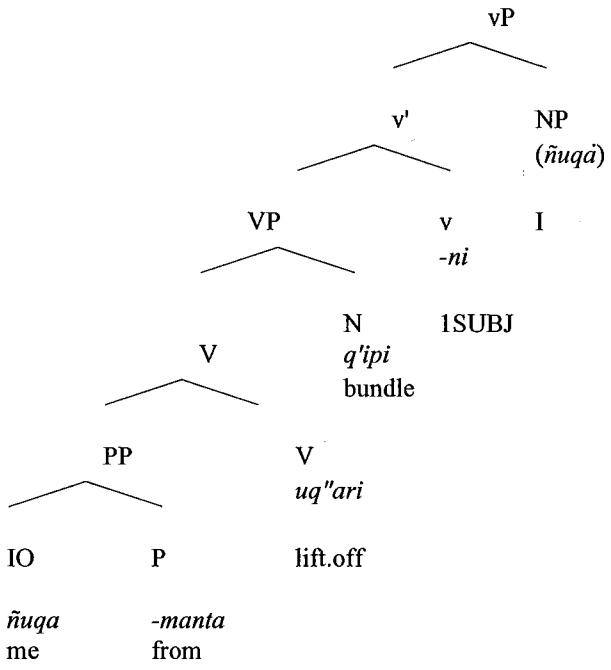
(49) ñuqa-man misi-ta wata-ni = (ñuqa-man) misi-ta wata-**ku**-ni
I-DAT cat-ACC tie-1SUBJ I-DAT cat-ACC tie-REF-1SUBJ
'I tied the cat to myself'

III. Reflexivization is prohibited if agreeing with an ablative-locative object;[10] an example is offered in (50). Bills presents no evidence regarding a locative object Case-marked with *-pi*.

(50) ñuqa-manta q'ipi-ta uq"ari-ni ≠ * (ñuqa-manta) q'ipi-ta uq"ari-**ku**-ni
I-ABL bundle-ACC lift.off-1SUBJ I-ABL bundle-ACC lift.off-REF-1SUBJ
'I lifted the bundle off myself'

I assume that where reflexivization does not appear, the non-direct object is predicated of an inherent Case-assigning adjunct, just as in the non-reflexive instances where reflexivization is ruled out. The underlying configuration I propose is found in figure 11:

Figure 11. Quechua Secondary Predicates: The Inherent Case-assigner (Reflexive Marking Prohibited)



[10] See note 7.

3.7 Case and Agreement Contingencies in Quechua Possessive Constructions

In all of the Quechua grammars I have consulted, characterizations of verbal object agreement omit mention of possessor raising structures. When agreement is discussed with regard to possessive objects, it is discussed in terms of the functional structure within the nominal phrase and not extended to the clause. The co-occurrence of genitive marking and possessor agreement in Quechua is not discussed.

Camacho, Paredes and Sánchez (1995) and Sánchez (1996), offer an extensive study of the functional structure within genitive nominal phrases in Spanish, Quechua and L2 Quechua-Spanish.[11] Here, I will supply complementary primary data on possessor raising in Southern Quechua that is a natural extension of my study of Case contingencies in Spanish and Quechua. I will abstract away from the functional structure of noun phrases and focus primarily on the verb phrase.

In Quechua, unlike in Standard Spanish, it is possible for a possessor object marked with genitive Case to trigger agreement marking on the verb. In example

[11] Camacho, Paredes and Sánchez discuss the co-occurrence of possessor agreement and genitive Case-marking in L2 Quechua-Spanish, but not in Quechua.

(51) below, the a) sentence shows genitive Case co-occurring with verbal object agreement; the b) sentence shows genitive Case with no verbal object agreement. These are equally acceptable. Again, unlike Spanish, the possibility of possessor object agreement on the verb does not disturb the possibility of possessor agreement on the possessed element, which continues to appear obligatorily.

(51) a. (qam-**pa**) chukcha-yki-ta rutu-**yki**
you-GEN hair-2POSS-ACC cut-2OBJ.1SUBJ
'I cut your hair'

b. (qam-pa) chukcha-yki-ta rutu-ni
you-GEN hair-2POSS-ACC cut-1SUBJ
'I cut your hair'

If the interpretive pattern is the same as Spanish, I would assume that the verbal agreement-marked sentence a) should have an affected interpretation. According to grammaticality judgments by Pedro Plaza (p.c.), the verbally non-agreeing sentence (b) is more amenable to the interpretation 'your hair is in the wastebasket and I am cutting it' than (a), which implies that the hair is still attached to your body while I am cutting it. I take this as evidence of affectedness, as well as of an inalienable vs. alienable interpretation being associated with the object-agreeing vs. non-agreeing forms, respectively, just as in the Romance languages (cf. Vergnaud and Zubizarreta 1992).

Based on this interpretive pattern, I will claim that Quechua transitive verbs selecting a possessive object enter into a Case alternation analogous to the one I have been discussing throughout chapters 2 and 3. My proposal for the Quechua genitive Case alternation is as follows: when there is no possessor object agreement on the verb, the possessor is assigned inherent Case the by the affix *-q* or *-pa.* When there is possessor object agreement on the verb, the affix *-q* or *-pa* has assigned no inherent Case, and the possessor must raise into VP to receive structural Case as an affected (internal) argument of the verb.

If this proposal is correct, then Quechua genitive affixes are similar to Spanish *a* in that they have two homophonous lexical listings; one is an inherent Case assigner, and the other, the spellout of the verb's structural Case.

This proposal leaves open a diffcult problem. In Quechua sentences displaying verbal possessor object agreement, despite the fact that the possessor may interpreted as an inalienable, affected argument of the verb, the requirement remains that the possessed object agree with the possessor. It seems that the lower object agreement should be ruled out by the Minimal Link Condition. I leave this question unresolved.[12]

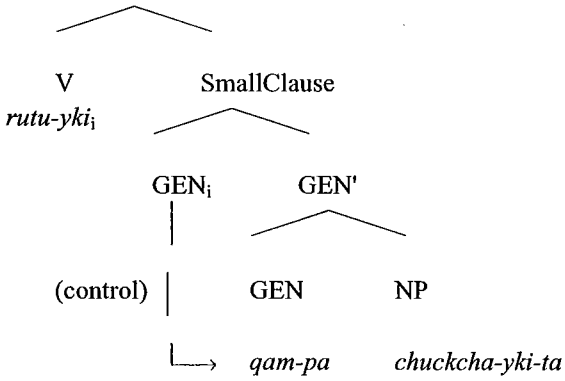
I will now explore the remaining (non-genitive) Case and agreement contingencies for Quechua possessor constructions.

Although accusative co-Case marking is possible in Quechua, a possessor argument may not be co-Case-marked accusative as illustrated in (52a-b) below:

(52) a. *(qam-ta) chukcha-yki-ta rutu-yki[13]
you-ACC hair-2POSS-ACC cut-2OBJ.1SUBJ
'I cut your hair'

b. *(qam-ta) chukcha-yki-ta rutu-ni
you-ACC hair-2POSS-ACC cut-1SUBJ
'I cut your hair'

[12] It may be that the relation between the inflected verb and possessor object is a control relation rather than a relation based on head movement as in the following structure (adapted from a suggestion of Zubizarreta, p.c.):



[13] This judgment may not hold for other dialects of Southern Quechua.

Finally and most differently from Spanish comes the discussion of dative Case-marking of possessor objects. In Spanish as well as French (Vergnaud and Zubizarreta, 1992), possessors may appear as dative clitics on the verb. This is not true in Quechua, in which it is impossible to have the possessor object Case-marked dative, with or without verbal object agreement, as illustrated in (53e-f):

(53) e. *(qam-man) chukcha-yki-ta rutu-yki
you-DAT hair-2POSS-ACC cut-2OBJ.1SUBJ
'I cut your hair'

f. *(qam-man) chukcha-yki-ta rutu-ni
you-DAT hair-2POSS-ACC cut-1SUBJ
'I cut your hair'

I will summarize the contrasts among Spanish and Quechua here. First, possessors may not appear in dative Case in Quechua, although they must be marked dative in Spanish if they trigger object agreement. Second, possessor object agreement on the verb is optional in Quechua, suggesting that in this language, the genitive Case affix can be both an inherent Case assigner, and the spellout of structural Case. Finally, there is evidence of dual constituency of the possessor object; it is an argument of the verb, triggering clausal object agreement and an affected reading, and it is an argument of the possessed noun phrase, triggering nominal object agreement.

3.8 Summary of Structural Congruence in Spanish and Quechua Object Marking

In this chapter, I have argued that Spanish and Southern Quechua share a common functional structure related to the instantiation of non-accusative object person agreement: namely, they each have a formal feature in the specifier of a functional category above the main verb phrase which attracts verbal movement into that position. This common functional structure allows for the checking of object agreement features on the verb, and for an affected interpretation of non-accusative objects which are assigned structural Case.

However, the two languages diverge in the Case contexts in which possessor object agreement is expressed. Spanish allows verbal possessor agreement when the possessor is marked dative and not genitive; Quechua allows just the opposite. This contrast is exemplified in the table 6 overleaf:

Table 6. Structural Case Congruence and Contrast in Spanish and Quechua

Spanish	Quechua
Dative Locative	**Dative Locative**
me puso el poncho (a mí) 1DAT put the poncho (to me) 'He put the poncho on me'	(ñuqa-man) lliklla-ta chura-wa-n me-DAT shawl-ACC put-1OBJ-3SUBJ 'He put the shawl on me'
Possessor	**Possessor**
* te cortó el pelo (**de** ti) 2DAT cut the hair (of you) 'He cut your hair'	(qam-**pa**) chukcha-yki-ta rutu-yki you-GEN hair-2POSS-ACC cut-2OBJ.1SUBJ 'I cut your hair'
te cortó el pelo (a ti) 2DAT cut the hair (to you) 'He cut your hair'	*(qam-man) chukcha-yki-ta rutu-yki you-DAT hair-2POSS-ACC cut-2OBJ.1SUBJ 'I cut your hair'

I will therefore conclude that the interpretation of dative locative and dative possessive constructions in Spanish should offer a window into the effects of functional feature transfer in L2 Quechua-Spanish.

4 The Monolingual Acquisition of Object Pronominal Elements

In this chapter I will review the literature in which researchers investigate the monolingual acquisition of object pronominal elements in Spanish, Dutch and English. The results suggest early mastery of the abstract functional structure needed for the interpretation of such elements in sentences, but relatively late mastery of non-reflexive elements *vis a vis* reflexive elements as measured by tasks which require children to choose among multiple co-referents for such elements.

My review will have three focus points: a) studies of the early spontaneous production of clitics in Spanish, b) an investigation of the early mastery of the binding properties of clitic-doubled vs. non-doubled prepositional dative objects in Spanish (i.e. the binding properties of each variant in the dative alternation); and c) investigations of the comparative development of reflexive and non-reflexive pronominal elements as measured by picture selection, yes/no judgment and act-out tasks. The results of these investigations of monolingual acquisition not only provide a test of the hypotheses in the introduction regarding the interaction of universal and language specific properties in monolingual acquisition, but they also will form the basis for comparison with children

learning similar structures in a second language as reported in subsequent chapters.

4.1 Early Spontaneous Production of Object Clitics in Spanish

Torrens and Wexler (1996, 2000) studied the spontaneous production of object clitics in a longitudinal sample of a Spanish child's speech recorded at one month intervals from ages 1;7-3;11 (years, months). The data were collected by López Ornat (1994) and can be found in the CHILDES database maintained by MacWhinney and Snow (1990).

Torrens and Wexler were mainly concerned with evidence of the child's knowledge of when object clitic doubling is obligatory, optional or prohibited, which, in the light of the analysis I have provided in chapter 2, stems from a combination of universal and language specific functional properties. They reported on accusative as well as non-accusative clitics, of which only the latter are of interest here. The range of non-accusative clitic constructions which they examined in the corpus was limited to full NP indirect objects with a [goal] theta role, which they list as an optional doubling context, and full NP indirect objects with a [possessive] theta role, which they list as an obligatory doubling context; they also note that doubling of pronominal indirect objects is obligatory.

Additional non-accusative clitic constructions found included dative experiencers, and clitic left dislocated datives.

Torrens and Wexler did not report at all on the prohibited doubling context in which an indirect object (pronominal or non-pronominal) is predicated of an inherent Case-assigning preposition. In other words, they did not examine the Spanish child's knowledge of the dative alternation discussed in Masullo (1992) and Demonte (1996), among others. It is not clear whether this omission stems from a lack of prepositional indirect object constructions in the database, or from their own preferential focus on accusative clitic constructions.

The main finding which I can derive from this study is that non-accusative clitic doubling is productive from a very early age. Doubling of a full NP indirect object occurs as early as age 1,10; doubling of a pronominal indirect object is found as early as age 2,1. Dative experiencer doubling is found as early as age 2,2; the left-dislocated dative clitic is found as early as age 3,9.

Lyczkowski (1999) offers a more extensive study of Spanish longitudinal production data found in three CHILDES files; he consulted the same corpus as Torrens and Wexler, as well as the Linaza corpus of a Spanish child ages 1,7-4,11, and the Montes corpus of an Argentine-North American child living in

Mexico ages 1,7-2,11. The Montes child is addressed in Spanish by her parents, playmates and caregivers.

Lyczkowski's findings concur with those of Torrens and Wexler: these children rarely omitted object clitics and rarely produced malformed or misplaced object clitics. Once again, there was no mention of dative clitics in alternation with prepositional objects.[14] The study does also examine the use of reflexive clitics, and they were produced with "remarkable proficiency". A summary of all types of clitics found in the corpora is taken from Lyczkowski (1999:50) in table 7 below:

[14] Lyczkowski also found that of 166 indirect objects in the Ornat and Montes corpora, only 6.63% were in the third person. Although he suggested a syntactic cause for the low frequency of third person dative objects, there is no reason why it could not also be a function of the discourse, as these are spontaneous production data.

Table 7. Clitic Doubling and Omission in Monolingual Spanish Acquisition

Sum totals	Clitic Objects	Full DP Objects	Doubled Objects	Other Errors	Missing Objects
Direct Objects	364 *34.44%*	610 *57.71%*	29 *2.74%*	34 *3.22%*	20 *1.89%*
Indirect Objects	355 *61%*	10 *2.39%*	35 *8.37%*	16 *3.83%*	2 *0.48%*
Reflexive Clitics	423 *97.02%*	n/a	n/a	5 *1.15%*	8 *1.83%*
Total	1142 *59.76%*	620 *32.44%*	64 *3.35%*	55 *2.88%*	30 *1.57%*

To conclude this section, there is consensus in two studies of the monolingual acquisition of Spanish object clitics that object clitics are produced early in this language (the earliest example cited is age 1,11) and that their distribution resembles that of the adult standard from the earliest stages of production. Information regarding monolingual children's knowledge of the dative alternation is incomplete in both of these studies, as no account was made of prepositional indirect objects, a prohibited doubling context. Furthermore, claims about children's knowledge of when something is grammatically prohibited based on their non-occurrence in a natural speech database is problematic; a lack of evidence of a particular structure should not be construed as definitive evidence that the structure is ruled out in a child's grammar.

4.2 Binding[15] and the Early Mastery of the Spanish Dative Alternation

Varela (1988) presents experimental evidence on the monolingual acquisition of object clitics that complements the previous two studies in important ways. First of all, she examines children's ability to correctly interpret dative arguments which are either doubled by a clitic or which are predicated of an inherent Case assigning preposition. In this way, she provides evidence of children's early mastery of the dative alternation. Second of all, her methodology is a truth value judgment task (Crain and McKee 1985, Gordon 1996), which allows for stronger claims than one can base on spontaneous production data about what structures are disallowed in a child's grammar.

Varela administered the truth value judgment task to 17 monolingual Spanish children ages 2,11-4,1 in Madrid. An adult control group of 5 people also took the test. The test was a game in which children were presented with a dramatized

[15] Binding theory was a central component of UG theory starting in the early 1980's, and the following conditions were held to be universal:
Condition A An anaphor must be bound in a local domain
Condition B A pronoun must be free in a local domain
Condition C A referential expression must be free (Chomsky 1995:96)

context staged with toys. At the end of each scene, a puppet said what happened. The child was supposed to reward the puppet if his description of the scene was correct, and feed the puppet a stone if his description was not correct.

In half of the sentences uttered by the puppet, the indirect object had an extrasentential interpretation, while in the other half, the indirect object was bound by the subject in violation of Binding Condition C. Varela's prediction was that children would accept the extrasentential interpretation, because what the puppet said could be true and grammatical at the same time, but she predicted they would reject the sentence in which the indirect object was bound by the subject, because it could only be true under an interpretation that violated Condition C. Under an interpretation consistent with the binding conditions, the sentence would be false.

The sentence types tested by Varela were the following:[16]

[16] Varela also controlled for overt vs. null subjects and found no significant difference in response scores.

Type 1: Clitic-doubled Indirect Object

(54) Él le hace un dibujo a Popeye
He 3DAT makes a picture to Popeye
'He makes a picture for Popeye'

Type 2: PP Indirect Object

(55) Ella hace un dibujo para Oliva
She makes a picture for Olive Oyl
'She makes a picture for Olive Oyl'

Crucially, Varela wanted to test whether children's knowledge of Binding Condition C was affected by whether the indirect object was doubled by a dative clitic or whether it was predicated of a preposition; in other words, whether children know that the binding conditions apply to agreement chains as well as to simple, unincorporated prepositional phrases.

She found 88% correct responses overall, with 97% correct acceptance, and 79% correct rejection. Most importantly, using an analysis of variance she found that there was no main effect for chainhood; in other words, performance was equivalent on sentences of types 1 and 2 above. I take this result to demonstrate early (at least between ages 3-4 years) mastery of the functional structure underlying the dative alternation among Spanish monolinguals.

4.2.1 Differential Performance on Reflexive vs. Non-reflexive Pronominals in Child Dutch, Spanish and English

In this section I will review several experimental studies of monolingual children's knowledge of locality conditions which constrain the binding of reflexive and non-reflexive pronominal elements. Each study was designed to examine children's ability to bring their hypothesized innate knowledge of the Binding Conditions A and B to bear on tasks involving choice among sentential co-referents at various developmental stages. The results of the first three studies showed that children performed significantly better on reflexive elements than non-reflexive elements, even as late as 10 years old. I will call this phenomenon "reflexive privilege" and mention proposals regarding its cause.

4.2.2 The Dutch Study

The first study was carried out in Holland by Deutsch, Koster and Koster (1986). The experimental method was a picture selection task which required that the child hear a stimulus sentence on audiotape and choose among four pictures to identify the correct interpretation. Within each sentence and picture set, the sentential subject contained two potential co-referents for the object pronoun. The child was supposed to use unconscious grammatical knowledge to choose which

co-referent was the unique correct one corresponding to the sentence. Sample stimulus sentences are as follows:

(56) De broer$_i$ van Piet wast zich$_i$
'The brother of Piet washes himself'

(57) De broer van Piet$_i$ wast hem$_i$
'The brother of Piet washes him'

(58) Piet z'n broer$_i$ bindt zich$_i$ wast
'Piet's brother ties himself up'

(59) De broer van Piet$_i$ bindt hem$_i$ vast
'The brother of Piet ties him up'

If we examine closely the type of construction tested, we note that the pronouns in question are in accusative rather than dative Case. Nevertheless, children's relative ability to choose among reflexive vs. non-reflexive co-referents will be of interest to the current study; therefore, results are given in some detail.

Deutsch, Koster and Koster manipulated the following variables for a 48 sentence design: *Type of anaphora* (±Reflexive), *Syntactic form of sentence subject* (Poss vs. PP), *Designation of antecedent* (Jan or Piet), *Verb.* The experiment was carried out with 96 children in three groups ages 6, 8 and 10 years old, and balanced for gender. Results are given in table 10 below:

Table 8. Deutsch, Koster and Koster's Percent Correct Picture Choice by Type of Anaphora and Subject Age[17]

Absolute scores are in parentheses.

	Age:		
Type of anaphora	6	8	10
Reflexive	53 (205)	87 (335)	90 (346)
Non-reflexive	54 (208)	71 (272)	81 (311)

Deutsch, Koster and Koster made the following observations about their mean results:

a) For all ages and sentence types, correct response exceeds chance level of 25%.

b) 6 year olds made the correct choice on both types with equal frequency

c) 8 and 10 year olds scored higher with reflexives than non-reflexives

They conducted an analysis of variance (ANOVA), and found main effects for the factors *Age*: $F(2,93)=40.19$, $p<0.0000$, *Type of anaphora*: $F(1,93)=9.30$, $p<0.0033$, and *Syntactic subject form*: $F(1,93)=21.00$, $p<0.0001$. There was a significant interaction between the factors *Age* x *Type of anaphora*: $F(2,93)=3.52$, $p<0.030$. They summarized their major finding thus:

> Children's understanding of both types of anaphora approaches the adult standard gradually, but that of reflexive anaphora is accelerated relative to nonreflexive anaphora. (1986:203)

This finding will be discussed in section 4.2.5, after perusal of the Spanish and English studies.

4.2.3 The Spanish Study

The second study of monolingual children's knowledge of locality conditions which constrain the binding of reflexive vs. non-reflexive elements was carried out among Puerto Rican children at a school in San Juan by Padilla (1990). The experimental method was an act out task with props and stuffed animals; stimulus sentences were read aloud by the experimenter. There were two variables manipulated; the first was the minimal binding domain for the pronominal element, or *MBD*. Levels of this variable were the sentence (S) or prepositional phrase (PP). The other variable was *Type of anaphora* (± Reflexive). Sample stimulus sentences in which the levels of these variables appear in combination are as follows:

[17] I have altered Deutsch, Koster and Koster's labels for ease of comparison with the Padilla results that follow.

S/+Reflexive

(60) La hormiguita$_i$ se$_i$ cepilla detrás de la zanahoria
the ant.dim REF brushes behind the carrot
'the ant brushes herself behind the carrot

S/-Reflexive

(61) La rana$_i$ la$_k$ cepilla detrás del helicóptero
the frog 3ACC brushes behind the helicopter
'the frog brushes her behind the helicopter'

PP/+Reflexive

(62) La tortuga$_i$ empuja la pelota al lado de sí misma$_i$
the turtle pushes the ball to.the side of herself
'the frog pushes the ball beside herself'

PP/-Reflexive

(63) La pantera$_i$ patea el avioncito detrás de ella$_{i/k}$
'the panther kicks the airplane behind her'

Just as in the Deutsch, Koster and Koster study, if we examine closely the type of construction tested, we note that the pronouns in question are in accusative rather than dative Case. Of particular interest is the distinction between sentences (60-61), in which we note that the pronouns in question are reflexive and accusative object clitics. Despite the fact that the object clitic is accusative and not dative, the children's relative ability to choose among reflexive vs. non-reflexive co-referents will be of interest to the current study.

Padilla tested 80 children in Puerto Rico in four groups, ages 3, 5, 7, and 9 years. Results are given in table 9 below:[18]

Table 9. Padilla's Mean Correct Responses by Minimal Binding Domain, Type of Anaphora and Age

Possible score range: 0-2

MBD	Type of anaphora	Age 3	5	7	9	Overall Agegroups
Sentence	Reflexive	0.60	1.20	1.80	1.85	1.36
	Non-reflexive	0.10	0.50	1.15	1.50	0.81
	Mean S	0.35	0.85	1.48	1.68	1.09
PP	Reflexive	0.65	0.40	1.50	1.65	1.05
	Non-reflexive	0.55	0.55	1.20	1.55	0.96
	Mean PP	0.60	0.48	1.35	1.60	1.01
	Agegroup Mean	0.48	0.66	1.41	1.64	1.05

Results of an analysis of variance yielded significant main effects on *Type of anaphora:* $F(1,76)=22.13$, $p=0.0000$ and there was an additional interaction between *MBD* x *Type of anaphora*: $F(1,76)=13.32$, $p=0.0005$.

[18] The figure was adapted from Padilla (1990:79) and axes have been inverted for comparison to Deutsch, Koster and Koster results; labels were also changed for ease of comparison

Of particular interest here are the results in which the sentence formed the minimal binding domain, as in sentences (64) and (65) above. Padilla's major finding in this regard was that:

> Success in acting out sentences with reflexive pronouns was significantly higher... than for sentences with non-reflexive pronouns... (1990:78)

I conclude this section by noting that there is a striking convergence between the monolingual Dutch and Spanish results despite language-specific differences and methodological differences. Implications of this convergence will be discussed in section 4.2.5.

4.2.4 The English Study

The third series of experiments of monolingual children's knowledge of the locality conditions which constrain the binding of reflexive vs. non-reflexive elements was carried out among English-speaking children by Chien and Wexler (1990). There were three experiments conducted using two types of act out task, as well as a fourth experiment employing a yes/no grammaticality judgment task. Each experiment involved at least 120 child subjects ages 2,6-7,0 as well as an adult control group of 15 subjects.

A simplified version of the sentences tested is the following:[19]

(64) Kitty wants Sarah to point to herself.
(65) Kitty wants Sarah to point to her.

Neither the target language nor the methodology is of interest to the current study, so I will not enter into detail about them, but instead I will report Chien and Wexler's major findings: children at the youngest ages (2,6-3,6) often responded according to a response bias and not according to a locality condition. This was true for both reflexives and pronouns. By age 6 or earlier, they were able to perform the task in conformity with the locality condition for reflexives. At the same age, however, children appeared in the first three experiments not to be able to apply Condition B in sentences involving pronouns. In other words, they attribute a reflexive interpretation to a non-referential pronoun.

Chien and Wexler then hypothesized that there was a pragmatic confound inherent in the English sentences, and they conducted a fourth experiment to tease this confound apart from children's knowledge of Condition B, by introducing quantified expressions into the test sentences to bind the anaphors. Once the

[19] Additional variables manipulated were whether the complement of the matrix verb was tensed or infinitival, and the gender of sentential arguments.

confound was removed, children showed evidence of their knowledge of binding conditions A and B from the earliest age at which they could distinguish the meaning of the quantifier *every* (age 5).

In summary, the Chien and Wexler studies of monolingual English children showed convergent results with the Dutch and Spanish studies in which performance on reflexive pronouns and clitics is accelerated with respect to performance on non-reflexive pronominal elements, although they were able to show that the English reflexive privilege effect could be factored out by introducing quantified expressions into the sentences to bind the anaphoric expressions.[20]

4.2.5 Conclusions and Further Studies of Reflexive Privilege in Monolingual Acquisition

In the beginning of this chapter I presented evidence that monolingual Spanish children specify the functional structure needed for the interpretation of object clitics early in the course of acquisition. Studies by Torrens and Wexler and Lyczkowski suggested that children between the ages of 1,7 and 4,11 are able to

[20] A fourth study, Crysmann and Müller (2000) found a similar pattern of acquisition of French reflexive and non-reflexive object clitics among bilingual children learning German and French simultaneously.

spontaneously produce object clitic pronouns and reflexives in obligatory and optional contexts. Furthermore, Varela found that children between ages 2 and 4 years are able to accept sentences in which a dative object is co-indexed with an agreeing clitic, and reject sentences in which a dative clitic-doubled or non-doubled indirect object is co-referent with the subject, in violation of Binding Condition C, with high levels of accuracy.

Despite this complex knowledge displayed by Spanish children, other Dutch, Spanish and English studies show that older children's performance lags behind when they are required to rule out a reflexive reading of a non-reflexive pronoun, despite their hypothetically innate knowledge of Binding Condition B. Children show superior performance assigning reference to reflexive vs. non-reflexive pronouns, and this effect may resolve as late as 8 to 10 years of age. Two explanations of reflexive privilege are suggested in the literature:

a) Binding of reflexives is resolved in a more local domain than non-reflexives and thus is easier to process (Deutsch, Koster and Koster 1986)

b) Binding of non-reflexives which are not bound variables requires access to a pragmatic Principle P which is independent of the Binding Conditions and governs the co-reference possibilities of non-reflexive pronouns; this pragmatic principle is not available to young children (Chien and Wexler 1990)

It remains to be seen whether the second explanation is adequate for the Spanish facts. Later work by Baauw (1999) argues that Chien and Wexler's explanation cannot apply in Spanish, because Spanish pronominal clitics are always bound variables. Baauw, Escobar and Philip (1997) and Baauw (1999) conducted further studies as to whether reflexive privilege, which they term the "Delayed Principle B Effect" (DPBE) occurs in Spanish and Dutch respectively, and in which syntactic contexts. Baauw, Escobar and Philip conducted a Picture Verification study on simple, quantified and complex accusative sentences with 45 Spanish children (mean age 5,6) and found no evidence of the DPBE except in complex predicates such as (66) below:

(66) La niña la ve bailar
'the girl sees her dance'

In the complex predicate context, the children allowed a reflexive interpretation of the non-reflexive clitic 46% of the time.

Baauw (1999) conducted a further study with Dutch children to see if he could force a retreat from the DPBE in Dutch effect by employing non-syntactic clitics or weak pronouns. In this way he sought to test his own hypothesis that the DPBE shows up only with syntactic clitics and is attributable to the inability of clitics to

refer deictically. He found that neither is the case; the Dutch children displayed a robust DPBE in all conditions.

Baauw concluded that another difference among Dutch and Spanish clitics must account for his finding of a DPBE in Dutch and a lack thereof in Spanish: he argues that the difference between Dutch and Spanish clitics is that only the latter are the result of some form of head-movement. Therefore, Baauw's work brings Padilla's findings into question, and presents an empirical and theoretical challenge: is it true that Spanish dative clitics, which are interpreted via head movement, will exempt the learner from the reflexive privilege effect? The Spanish dative locative and possessive clitics presented in chapter 2 have been analyzed by a number of linguists as head-moved structures and thus should bring Baauw's claim into sharper focus.

5 Dative Clitic Constructions in L2 Spanish

This chapter will cover two distinct topics. First, I will discuss two studies of the adult second language acquisition of Spanish dative clitic constructions. These studies are of interest because they coincide with the current study in terms of the abstract functional structure to be acquired, and in terms of the target language. They differ from my current study in two major respects: a) in the age of subjects tested (adults rather than children) and b) in the first language of subjects tested (English and French rather than Quechua). Each study compares within its design the performance of subjects from two different L1 groups, and results suggest that L1 feature transfer does play a role in adult L2 performance, but that such transfer is not permanent among adult learners.

In the second part of this chapter I will discuss studies of the second language acquisition of Spanish clitic constructions among Southern Quechua speakers. I will highlight claims that have been made regarding novel clitic constructions in the [possessor] and [locative] contexts among L2 Spanish speakers in the Andes, and indicate issues that remain to be addressed. These open questions, together with those based on monolingual acquisition discussed in the last chapter, form the motivation for the experiment described in chapters 6-8.

5.1 Adult L2 Acquisition of Dative Constructions

5.1.1 Bruhn de Garavito's Study of L2 Preposition Incorporation

Bruhn de Garavito (2000) tested three groups of L2 speakers of Spanish, who had acquired the language after puberty, on their knowledge of the abstract properties of Spanish reflexive and dative constructions. The first group consisted of near-native proficient speakers whose L1 was French; the second, of near-native proficient speakers whose L1 was English; and the third, of advanced speakers whose L1 was English. The advanced group proved extremely heterogeneous and I will not discuss its results here. There was also a control group of Spanish native speakers.

The target and first language grammars studied are different in terms of their functional structure and Case assignment properties. In the most general terms of linguistic contrast, English was hypothesized to share the option of preposition incorporation and structural dative Case assignment with Spanish, although object agreement in English is null. French has overt object agreement, but dative is an inherent and not structural Case.

In Bruhn de Garavito's study, the knowledge about reflexives tested involved the distinction among impersonal passives and inchoatives, which trigger object

agreement, and impersonal reflexives, which do not trigger object agreement. Pro-drop and word order facts which are related to the instantiation of agreement were tested via a written grammaticality judgment task. Results on the tests of reflexive structures indicated no significant differences in performance among the L1 French near-natives, L1 English near-natives, and Spanish control group. Bruhn de Garavito took this as evidence against hypotheses that L2 learners are not able to reset the functional feature parameters of L1 when acquiring an L2.

The knowledge about dative clitic structures tested involved the agreement and reference properties of the clitic, as well as constraints on incorporation, such as knowledge of the affectedness requirement on the incorporated object, and the movement possibilities of incorporated possessors. Written grammaticality judgments were elicited on 16 sentence types in all. Overall results indicated no significant difference among the near-native French, near-native English, and Spanish control groups. Bruhn de Garavito again offers this as evidence against hypotheses that L2 learners are not able to reset the functional feature parameters of L1 when acquiring an L2.

Despite the overall high performance of all three groups, there were significant differences within specific test conditions. The English near-native group was significantly worse in its performance than other groups in its ability to correctly

judge the grammaticality of dative clitic sentences when the referent was non-human. Therefore, Bruhn de Garavito suggests that at least some of the English speakers in the group may have persisted with a null head of the functional category in which object agreement is checked. If this is true, English speakers may have analyzed the clitic to be crucial only as a marker of the feature [+human] and not of other agreement features. The French speakers, on the other hand, appear as a group to have departed from their L1 assumption that dative may only be an inherent Case.

In both the English and French situations, the L1 instantiates a subset of the properties needed for the target grammar. Bruhn de Garavito notes that learnability theory makes no prediction to explain why the French speakers are able to go beyond the featural restrictions of their L1 grammar, but the English speakers are not. In sum, Bruhn de Garavito's results offer evidence that there may be a role for the L1 in adult second language acquisition, but that transferred features do not persist.

5.1.2 Montrul's Study of L2 Dative Object Agreement

Montrul (1999) examined the role of functional specification of a dative object agreement phrase in the grammar of adult French and English speakers at various stages of acquisition of Spanish as a second language. Beginning, intermediate

and advanced students of Spanish took a written elicited production task and a written grammaticality judgment task in order to test their knowledge of sentence structures hypothesized to be related to structural dative Case and a syntactically active dative agreement phrase, or the lack thereof.

Twelve sentence types were tested, five of them ungrammatical in Spanish, seven of them grammatical. The ungrammatical sentences were Spanish transliterations of what would be correct constructions in English, a language hypothesized by Montrul (based on work by Lightfoot 1991) to lack structural dative Case.

The Case-assigning properties attributed to English by Montrul were different from those attributed to English by Bruhn de Garavito,[21] and the range of structures tested were less closely related to one another. In fact, Montrul's results suggest that the wide variety of structures tested did not cluster in the course of acquisition. There was also no significant development across groups, indicating that none of the subjects were true beginners. Nevertheless, results on particular structures closely related to dative agreement are of interest.

[21] Bruhn de Garavito assumes that structural dative Case is still active in English (2000:196) as evidenced by the dative alternation. Her assumption coheres with that of Torrego (1998) and Pesetsky (1995), among others.

First of all, the overall pattern of performance for the English and French groups was similar, although the English speaking group had significantly different results from the control group, and the French group did not. I have excerpted results of interest to construct table 10 below:

Table 10. Selected Results from Montrul 1999 on L2 Spanish AGR IO

Sentence Types	English Scores	French Scores
Type 2 Double Objects (*DO) **Pedro regaló Juan un auto* 'Pedro gave John a car'	significant difference from control	same as control
Type 7 Indirect Objects (NP PP) Pedro regaló un auto a Juan 'Pedro gave a car to Juan'	significant difference from control	same as control
Type 10 Clitic- doubled Indirect Objects (IOC) Pedro les prometió juguetes a los niños 'Pedro promised toys to the kids'	significant difference from control	same as control
Type 11 Indirect Object with no clitic (IO)[22] Pedro prometió juguetes a los niños 'Pedro promised toys to the kids'	significant difference from control	same as control
Type 12 Dative Experiencers A Juan le gusta la música 'To Juan likes music'	same as control	same as control
Type 5 Nominative Experiencers (*NE) *Juan gusta la música 'Juan likes music'	same as control	same as control

The English-speaking group performed significantly worse on rejecting incorrect English-like double object constructions, and on accepting correct indirect object

[22] Type 11 and type 7 appear to be the same construction, employed in different tasks.

constructions involving an NP PP construction without clitic doubling. The English group also performed significantly worse on clitic-doubled indirect objects, and non-doubled indirect objects. The English group performed at the level of the control group with regard to accepting grammatical dative experiencers and rejecting ungrammatical nominative experiencers.

Montrul's results suggest that there was a role for the native language in determining the acquisition of Case and agreement in the L2, which is evident in the significantly different results for each L1 group. Nevertheless, transfer from L1 was not permanent, as indicated by the English speakers' native-like attainment on types 12 and 5, as well as their overall high scores.

5.2 The Literature Regarding Non-accusative Clitics in L2 Quechua-Spanish

5.2.1 The Thematic Range of Non-accusative Clitic Doubling

In Kalt (2000) I explored the thematic range and Case/agreement characteristics of non-accusative clitics in a corpus of L2 Quechua-Spanish narratives. My objective was to search for exemplars of the full range of dative clitic structures mentioned in Masullo's study of Standard Spanish, to see if these were productive in L2 Quechua-Spanish as well, and if any types gave rise to novel forms.

The data were collected in an open market in Lima, Perú by Liliana Sánchez and associates (Sánchez 1997). Nineteen subjects were asked a total of twenty-two questions on social and language exposure factors. Then they were asked to view a picture book by Mercer Mayer (1969) concerning a boy and his dog who go in search of a lost frog. The subjects were asked to narrate the story, first in Spanish and then in Quechua. According to Sánchez (1997):

> The subjects ...had migrated from communities that are monolingual in Quechua or bilingual in Quechua and Spanish to the city of Lima, an environment mostly monolingual in Spanish. The youngest subject was twelve years old and the oldest forty-eight years old. Ten of the subjects were female and nine male. Subjects had their first exposure to Spanish between the ages of four and sixteen mainly in naturalistic contexts, but also through formal instruction. Some of the subjects had their first exposure to the L2 in their place of origin; others in the city of Lima. With the exception of two, subjects had not received formal instruction in their L1.

Utterances were selected from the corpus for inclusion in the database in a series of passes. In one pass I recorded all instances of utterances that contained clitics. In another pass I recorded all instances of verbs cited in the literature as potential participants in double object constructions. Another pass was made for sentences containing prepositions other than *a* or *de*. Still another pass was made through the stimulus set and then the corpus looking for all possible situations which might involve an object with the thematic role [goal, source, experiencer,

possessor, locative]. The fully coded database was then submitted to native speakers of Iberian and Lima Spanish for review.

All of the utterances except one involved agreement with a third person object, due to the nature of the task and stimulus. Despite the fact that there is no overt third person object agreement in Quechua, I found twenty-two instances of suppliance of a third person clitic, and nine instances of a non-doubled prepositional object in the L2 corpus. There was a roughly equal number of utterances found for each of the thematic contexts under investigation, and identity of the speaker, age of exposure or number of years of exposure to L2 was not a predictor of clitic use.

There were two thematic contexts which I identified as apparent sources of novel non-accusative forms. The first was the possessor context; there were several instances of unraised possessors, but only one in which a clitic might be construed to double the possessor object:

(67) luego el niño se agarrándole$_i$ el cuerno del venado$_i$, se va velocidad
then the boy REF clinging-3DAT the horn of the deer, REF goes speed
'then the boy, clinging to the horn of the deer, goes away quickly'

In sentence (67) there is an extra clitic *se* before the verb whose reference is unclear, and the Case marker on the possessor is genitive rather than dative.

The second thematic context which appeared to give rise to novel forms was labeled in that study as the [locative] context. There were several clitic doubled indirect objects in alternation with preposition-marked (undoubled) objects to describe a picture in which the dog put his head in the jar and got it stuck there. In chapter 3 of this thesis I suggested that both Quechua and Spanish double the person features of locative objects when marked with a structural dative Case assigner. The semantic restriction is that the object must be interpreted as affected. In the narrative corpus, I found the following sentence involving the location of the dog's head:

(68) el perro lo_i metió la cabeza al $frasco_i$
the dog it.3ACC_i put the head to the $bottle_i$
the dog put its head in the bottle

Native Spanish speakers concur that this is not a locative doubling context in Standard Spanish, perhaps because it is difficult to consider the inanimate bottle an affected object when there is an animate direct object. It appears that the clitic *lo* could be either doubling the accusative object with mismatched gender, or it could be doubling the person features of a possessor object, or doubling an unaffected locative object. A similar problem without the gender mismatch option is presented by the following utterance by a different speaker within the same database:

(69) se lo metió el hocico al bidón
3DAT 3ACC put-3SUBJ the muzzle to the bottle
he put his muzzle in the bottle

Again, it appears that the Quechua-Spanish speaker may be doubling a locative argument with the clitic *lo*.

In Kalt (2000) I suggested that another possible explanation for this novel form is the fact that there is a class of verbs of motion in Quechua which require object person marking; these are verbs marked with the derivational affix *-mu*.[23] I based this suggestion on an observation by Paredes (1996) that the use of non-accusative *lo* in Quechua-Spanish may correspond to a restructuring of the clitic system to mark verbs of motion differently than other verbs.

To my knowledge, this context is mentioned only in Paredes (1996), and the sentences which exemplify it are rare, constituting less than 1% of the third

[23] With a verb implying motion, the affixation of *-mu* indicates that motion is toward the speaker's location, as in example (a):
a) t'anta-ta apa-mu-nqa 'He will bring the bread'
b) t'anta-ta apa-nqa 'He will take the bread' (Bills 1972:1)
When the verb does not imply motion, the affixation of *-mu* indicates that the verb's action takes place in a location distant from the speaker and hearer, as in example (c):
c) t'anta-ta ranti-mu-nqa 'He will go buy some bread'
d) t'anta-ta ranti-nqa 'He will buy some bread' (Bills 1972:2)
Further grammaticality judgments regarding derivational affixes such as *-mu* are found in the notes to Appendix D.

person clitics in her database, which included 1698 clitic constructions. Nevertheless, the constructions she cites are striking in their departure from Standard Spanish. Paredes suggests that a relexification of the Quechua Case marker *-ta* (accusative) might have influenced the L2 speaker to produce sentences such as (70-72):

(70) Cuando lo llega el invierno
'When winter comes'

(71) Cuando lo cae la helada
'When frost falls'

(72) Lo voy a Lima
'I go to Lima' (Paredes 1996:155)

Since *-ta* is a Case affix it should be expected to transfer to nominal elements and not verbs; I therefore suggest an alternative to Paredes' contention that such clitics might correspond to Quechua *-ta*. Rather, I believe that if L1 transfer is involved, they might correspond to a modal directional element such as cislocative *-mu*.

The clitics in sentences (70-72) seem intuitively to play quite a different role than those in sentences (67-69) above; however, the fact that these are narrative production data makes this difficult to determine with precision.

I concluded Kalt (2000) by noting that clitic doubling in the possessor and locative contexts should be systematically investigated in a more controlled experiment.

5.3 Other Studies of Possessor Doubling in Quechua-Spanish Spontaneous Production

Studies of L2 and bilingual Southern Quechua-Spanish reviewed in Escobar (1994), and others carried out by Camacho, Paredes and Sánchez (1995), Sánchez (1996), and Paredes (1996) suggest that possessive sentences are a widespread and notable context for novel clitic constructions. Most of these studies have focused on the word order and NP-internal agreement properties of possessive sentences, noting that the novel forms involve a possessor-possessee word order and pervasive appearance of the elements *su* on the possessee and *de* on the possessor, neither of which may co-occur with a clitic in Standard Spanish. Here I will explore these aspects in terms of the wider phenomenon of a non-accusative Case alternation as proposed for Spanish and Quechua in chapters 2 and 3 of this dissertation.

The L2 Quechua-Spanish sentence from Camacho, Paredes and Sánchez in (73) is of interest:

(73) Lo_i amarran su pata del $condor_i$ como si estuviera montando
'They tie the condor's leg as if it was riding'

A grammatical Standard Spanish counterpart to (73) is (74):

(74) Le_i amarran la pata al $condor_i$
'They tie the condor's leg'

Camacho, Paredes and Sánchez claim that despite apparent accusative Case marking, the clitic in (73) co-refers not with the possessee but rather with the possessor. They employ a variety of extraction tests to prove this point.

I assume that if the clitic on the verb is in fact co-referent with the possessor argument, then *de* must be the spellout of structural Case, and not an inherent Case assigner, in this speaker's grammar of Spanish. This is required by the Minimal Link Condition. Therefore, in L2 Spanish the element *de* is hypothesized to have different Case assigning properties than its counterpart in Standard Spanish.[24]

Similarly, the element *su* in sentence (73) above cannot be a reflection of inherent genitive Case; but rather, it is hypothesized to spell out structural genitive Case concord, and/or person agreement. In an earlier manuscript (1995),

[24] Camacho, Sánchez and Paredes make a similar point when they claim that Quechua-Spanish *de* cannot function as a true preposition.

Camacho and Sánchez claim that *su* is analyzed as an agreement marker in the early stages of L2 Quechua-Spanish, in which determiners are unspecified, as in their L1.

The Camacho, Paredes and Sánchez study includes a detailed analysis of the internal structure of the Quechua unraised genitivc phrase, as well as a suggestion of how this structure transfers to early L2 Spanish and changes over time. Missing, however, is a discussion of whether raised possessor arguments may be marked genitive, dative or accusative in Quechua. I have sought to fill in this gap in chapter 3, showing that genitive may be a structural or an inherent Case in Quechua, and structural genitive Case co-occurs with possessor object agreement on the verb. Possessor arguments can never be marked accusative or dative in Quechua.

Although the Camacho, Paredes and Sánchez study involves the use of the clitic *lo* and not *le* in L2 Peruvian Quechua-Spanish, Escobar (1994) provides the following datum which suggests that *le* is also used in Peru by L2 Quechua-Spanish speakers:

(75) a la gallina le cortamos su cabeza
to the hen DAT cut-off-2pl her head
We cut the hen's head off

In sentence (75), a dative possessor clitic occurs in a sentence in which the possessee bears genitive marking. Based on the studies cited in this section, we can conclude that there is some evidence for Case feature transfer in L2 Quechua-Spanish, which is not surprising due to the mismatch of Case contexts in which object doubling may appear in the L1 and target.

5.4 Residual Questions Regarding Child L2 Quechua-Spanish Acquisition

The following questions emerge from the previous studies of possessor and locative agreement in L2 Quechua-Spanish:

1) do Bolivian L2 Quechua-Spanish speakers comprehend *le* as a possessor object marker when there is no genitive marking expressed in a sentence as in L1?

2) if the answer to (1) is yes, does this comprehension occur later in development than the comprehension of a dative locative construction, for which there is no Case mismatch between Quechua and Spanish?

In the next chapter I develop the design of an experiment which is aimed toward answering these questions, as well as those raised in the previous chapter on monolingual acquisition.

6 Rationale and Experimental Design

6.1 Overview

The objective of the experiment described in the remainder of this dissertation is to bring Bolivian data to bear on specific questions raised in the previous chapters regarding the monolingual and L2 development of clitic constructions. Having conducted a contrastive analysis of dative object agreement in the L1 and target, and having examined several relevant studies of the acquisition of Spanish pronominal elements in monolingual and second language populations, my aim will be to assess the relative contributions of surface and abstract properties of L1 and target, and universal syntactic principles, toward the development of a child's ability to interpret non-accusative clitic constructions in a second language.

The view of the role of Universal Grammar in child second language acquisition which I intend to develop is based on the model for adult acquisition put forward by Flynn and Martohardjono (1994) in which UG principles are continuously available to the second language acquirer and remain separate from language specific properties throughout development. In such a view, the UG principles may be considered constantly accessible architectural primitives of the human language faculty. The question of language specific properties, and the feature

specification of functional categories in particular, then comes into sharper focus. In constructing a second language grammar, does the child initially attempt to link her L1 functional specifications to the L2 lexicon, retaining L1 specifications until failures of interpretation lead to parameter resetting (as claimed by Schwartz and Sprouse 1996) or does the child attempt to construct the functional specifications of L2 from among a wider range of options, resembling more closely the monolingual acquirer of the target?

Two contrasts will be brought to bear on our understanding of child second language acquisition. First, I will compare successful interpretation of reflexive vs. oblique object clitics in order to consider how Bolivian child L2 acquisition relates to the documented phenomenon of reflexive privilege in monolingual acquisition. Second, I will compare successful interpretation of possessor vs. locative object clitics, in order to test the hypothesis that abstract features transfer from L1 to L2 in the initial state of acquisition.

I will argue that straightforward feature transfer from Quechua would make interpretation of dative locative clitic constructions easier for children than dative possessor clitic constructions, because the former involve greater feature congruence between L1 and target, and the latter involve a structural mismatch.

6.2 Task Design

6.2.1 General Design Considerations

The experiment that follows was designed to overcome several disadvantages of previous studies of narrative production data in L2 Quechua-Spanish. Narrative data have two disadvantages: there is little experimental control over the content and form of individual sentences in a narrative, and the structures one is hoping to encounter may be absent or of low frequency in a particular narrative, for reasons independent of a subject's syntactic competence. For these reasons, I designed a picture selection task (Gerken and Shady 1996) and concurrent elicited description task to specifically investigate Bolivian children's comprehension and production of sentences involving non-accusative clitics.

Because this experiment was to be administered among children living in a different culture from my own, and in several communities isolated from outside influences, I took cultural appropriateness into account in the design of test sentences. Prior to choosing the picture selection task, I conducted several informal pilot studies with Quechua-Spanish speaking adults in Boston, as well as a formal pilot study with children in Bolivia. I administered the children's pilot study as an elicited imitation task (Lust, Flynn and Foley, 1996) in January, 2000 in the Quechua community of Q'ullakamani, in the Sucre region, and among

monolingual Spanish children in Cochabamba, while my Bolivian colleague, graduate student Vicente Limachi administered it in the Aymara community of Cutusuma, La Paz region. The elicited imitation task did not prove particularly amenable to testing children's competence with unstressed, single-syllable elements such as object clitics, particularly in noisy surroundings.

At that time we also piloted the use of a North American picture book, 'Pat the Bunny', and a 'Lambchop' puppet as sentence elicitation tool. Although these tools were engaging and stimulating for the children, some of the contexts presented in the pictures were unfamiliar (eg. a North American man shaving; indigenous Bolivians have little facial hair) and there was an insufficient number of pictures related to the syntactic contexts in question. For these reasons, when designing the main study I decided to employ a picture selection task.

The test sentences were created with attention to pragmatic felicity because of the age of the subjects involved. According to Thornton (1996),

> Children have frequently been found to make errors in comprehension experiments that tested structures in infelicitous circumstances...[For example:] In early experiments, children's knowledge of relative clauses like the one in *The lion kissed the zebra that jumped over the fence* was examined in situations where only one zebra was available, instead of a set of zebras. In acting out the sentence, children often made the lion kiss the zebra and then jump over the fence (instead of making the zebra jump

> the fence). ..Hamburger and Crain (1982) found that with the simple addition of an extra zebra, children performed more accurately than had been reported for previous experiments...(Thorrnton 1996:86)

6.2.2 Characteristics of the Test Sentences

Test sentences were created corresponding to the following variables:

1) *Clitic Type* (reflexive clitic, non-reflexive clitic, no clitic.) The factor Clitic Type determined correct picture selection from among three possibilities presented for each trial.

2) *Verb Type* (ditransitive, transitive.) The thematic roles of objects were limited to locative objects of ditransitive verbs, and possessor objects of transitive verbs, respectively.

Vocabulary employed was limited to items judged by the interviewers and the children's teachers to be familiar to them. Ditransitive verbs used were: *poner* 'to put', *echar* 'to throw, pour or spread'. Transitive verbs used were: *tocar* 'to touch', *lavar* 'to wash'. The subject of each sentence was *Ana* for half the trials, and *José* for the other half, and the clitic objects likewise each referred to either *Ana* or *José*. All direct objects were matched in gender within picture sets.

There were two tokens of each type. The full design (*Clitic Type* x *Verb Type* x *Tokens)* yielded (3 x 2 x 2) = 12 test sentences, plus 3 pretest and 1 post test item. Sample sentences follow in table 11 below:

Table 11. Sample Sentence Types

	Clitic Type (Type of Anaphora)	**Verb Type**
1) Ana_i se_i pone el bulto. Ana 3REF puts the bundle 'Ana puts the bundle on herself	REF (Reflexive)	DITRANS theta role of non-accusative object is locative
2) Ana_i le_k pone el bulto. Ana 3DAT puts the bundle 'Ana puts the bundle on him'	OBL (Non-reflexive)	DITRANS theta role of non-accusative object is locative
3) Ana pone el bulto en el suelo. Ana puts the bundle on the floor	NO CLITIC (Trivial)	DITRANS theta role of non-accusative object is locative
4) $José_i$ se_i lava los pies. José 3REF washes the feet 'José washes his feet'	REF (Reflexive)	TRANS theta role of non-accusative object is possessor
5) $José_i$ le_k lava los pies. José 3DAT washes the feet 'José washes her feet'	OBL (Non-reflexive)	TRANS theta role of non-accusative object is possessor
6) José lava los platos. José washes the dishes	NO CL (Trivial)	TRANS object is simple accusative

6.2.3 Picture Stimulii

In a picture selection task, more than one picture is arranged on a page. Children hear a stimulus sentence, and then choose from among the pictures the one the best matches the meaning of the sentence. In this study, each picture set had three pictures arranged from top to bottom on a page. The crucial design factors for picture stimulii included cultural appropriateness, as determined during the pilot study, and plausibility and salience of the items depicted. I will discuss each factor in turn.

The artist, Abigail Norman, created culturally appropriate pictures by studying photographs of the children I had tested in January, as well as photographs in postcards and books of Andean children. With regard to the next factors: Gerken and Shady (1996) indicate that all pictures in a set must be balanced for plausibility, and salience or interest value, to avoid biasing children toward selecting a picture for non-linguistic reasons. Furthermore, the artist avoided distracting clutter in the pictures, but made sure that all of the objects mentioned in any sentence corresponding to the three-part set, was included in each picture in the set.

The pictures were made as large pencil drawings, from which three original reductions of equal size were made and pasted on pages size 81/2 x 11". Pictures were arranged randomly on each page to avoid introduction of a positional bias on test results. Pages were then grouped according to one of two sentence batteries (order A or order B), placed in protective covers and kept in identical three-ring binders for test administration. All test sentences are found in Appendix C; pictures are found in Appendix B.

6.3 Methods and Procedures

6.3.1 Subject Characteristics

The experimental task was administered individually over a period of three weeks in May, 2000 to 100 Bolivian schoolchildren. My objective in selecting participating schools was to find a maximal distinction in terms of language profile; children in the monolingual group of children were to have as little exposure to Quechua as possible, and children in the L1 Quechua group were to have as much exposure to their L1 in the home and community as possible, while still having access to substantial exposure to Spanish at school.

The language profile of participants was arrived at by two means: first, data were only collected at schools which had a predominance of children who were either monolingual Spanish speakers or L2 Quechua-Spanish speakers. One school in the department of Cochabamba and five in the department of Sucre/Chuquisaca were selected for participation; both are highland valley areas in the center and south of Bolivia. Second, children were asked during the pretest whether there was anyone in their home who spoke to them in Quechua or Spanish. Test results of monolingual Spanish-speaking children who had an adult that spoke Quechua to them at home were not included in the results reported here; likewise, test

results of Quechua-speaking children who reported that their parents only spoke Spanish to them at home were not included in the results of this study.

Among the Quechua speakers my objective was to ensure the collection of data from children at a range of stages of grammatical development; this meant that I tested children from kindergarten to eighth grade. Outside urban centers and in the urban periphery, access to formal education beyond fourth grade is rare, so the majority of children tested fell into the age 7,0-10,11 range. Among the Spanish speakers, I tested children from grades 1-5, and the majority fell into the age 6,0-8,11 range.

I did not have access to an independent measure of grammatical or cognitive development, and initially I assumed that grade in school would provide a developmental grouping criterion. An analysis of the children's age and grade data caused me to abandon grade as a grouping criterion, for I discovered that there was a wide age range per grade among the Quechua-speaking children. I was concerned that grade might be an unreliable index of Spanish proficiency under these conditions, since older children in lower grades might have had substantial exposure to Spanish outside school, especially when closer to an urban center, or when older siblings speak Spanish at play.

In table 12 below I show the disparity in age per grade distribution among the monolingual and L2 groups:

Table 12. Agespans per Grade by Home Language Group

Home Language	Raw Agespan per Grade	Average Agespan per Grade
L1 Quechua	6 year span	3 year span
Monolingual Spanish	1 year span	1 year span

As an alternative grouping criterion I clustered children by age in two year spans; this yielded more evenly distributed groups still large enough for statistical testing, although there were two small groups at the upper and lower periphery of the Spanish and Quechua groups, respectively.

There was a total of 16 children in the monolingual Spanish group, and the data were subgrouped as follows: ages 5,0-6,11 (group label: age 6, n=7), ages 7,0-8,11 (group label: age 8, n=7), and ages 9,0-10,11 (group label: age 10, n=2). They were tested at two highlands elementary schools in the urban centers of Cochabamba and Sucre. Their parents were from the lower middle and working class and did not have Quechua-speaking servants raising their children.

There was a total of 84 children in the L1 Quechua, L2 Spanish group, which was subgrouped as follows: ages 5,0-6,11 (group label: age 6, n=5), ages 7,0-8,11 (group label: age 8, n=26), and ages 9,0-10,11 (group label: age 10, n=38) ages 11,0-12,11(group label: age 12, n=7), and ages 13,0-15,11(group label: age 14,[25] n=8). They were tested at four highlands rural and urban-peripheral communities outside Sucre: Hornok'asa, Quirawani, San Juan and Pisily. Their parents were farmers and workers in small industries, and used Quechua almost exclusively in the home and community.

A summary of group composition factors are presented here as tables 13 and 14:

Table 13. Monolingual Bolivian Spanish Agegroup Composition

Agegroup	Age	Number of Children
6	5,0-6,11	7
8	7,0-8,11	7
10	9,0-10,11	2
TOTAL	5,0-10,11	16

[25] There was only one 15 year old, hence the label follows the pattern for previous groups.

Table 14. L2 Quechua-Spanish Agegroup Composition

Agegroup	Age	Number of Children
6	5,0-6,11	5
8	7,0-8,11	26
10	9,0-10,11	38
12	11,0-12,11	7
14	13,0-15,11	8
TOTAL	5,0-15,11	84

6.3.2 Interviewer Characteristics

The test was administered to each child by one of two interviewers: the author, an L2 speaker of Spanish, or my colleague Martin Castillo, a balanced bilingual speaker of Southern Quechua and Spanish, who was a graduate student of intercultural curriculum development at the Universidad Mayor de San Simón in Cochabamba. I spent from one to four days at each school except Pisily, in which testing was conducted by Castillo. I was introduced to the children by teachers, parents and/or school authorities. Castillo was well-known to the children in Pisily as he had previously spent six weeks in residence observing and assisting at the school.

In order to compensate for differences in the interviewers' language profile, the stimulus sentences were presented via audiotape, pronounced with normal intonation by a female monolingual Bolivian Spanish speaker.

6.3.3 Pretest and Test Procedure

The experimental task was administered in the following way: subjects were invited to leave their classrooms or school recess one at a time and work with the interviewer on a task which would take approximately fifteen minutes. The interviewer spoke only Spanish with the child for the duration of the task. The task was presented as a game or project in which the child was to help the interviewer learn about how Spanish is spoken in Bolivia; or simply to look at pictures together and talk about them. The interviewer showed the child two tape recorders and explained that on one of them was a recording of a woman describing the pictures in Spanish. The other recorder was for the purpose of recording the child's descriptions. She/he asked the child if they had ever heard themselves on tape before, and gave each child an opportunity to hear a playback of themselves answering questions. The second tape recorder was then left on record mode for the duration of the session.

During the pretest, the interviewer showed the child the first page depicting a boy and girl and said the following: "I have pictures of José and Ana here; can you point to which one is José?" While looking at the next page, children were invited to choose which picture corresponded to what the person on the tape was saying. The interviewer congratulated the child for each selection and circled each response on the coding sheet (see Appendix C). The interviewer then pointed to

the topmost picture which the child had not selected and asked "and what is Ana doing here?" (¿y qué hace Ana aquí?) The question was tailored to fit the actor in each picture. This procedure was repeated with the bottom-most unselected picture as well. Children were praised after each response. There were three pages of pictures associated with the pretest.

The test followed this same format and ensued immediately, with the presentation of twelve stimulus sentences and twelve corresponding pages of three-picture sets, plus a final post-test sentence and picture set.

All children heard all twelve test sentences and viewed all twelve picture sets. The order of sentence types was randomized within two batteries and administered to half the children in order A and to the other half in order B.

6.3.4 Irregularities in Test Administration

In all schools except Pisily there were times at which a quiet, isolated room was unavailable for administration of the test. Under noisy conditions, I sometimes repeated the taped stimulus with my own voice, using normal intonation identical to that on the audiotape. I also sometimes repeated the child's response to be sure it would be recorded. These irregularities in administration were entered into each

subject's record and the consequences for particular scores were meticulously measured using statistical analysis. I report results in section 7.4.

A second irregularity involved review of vocabulary used in the test. In the course of spending time at the schools it became evident to me that some vocabulary items were unfamiliar to the children or had a more frequent regional variant. In some Cases, I gave a brief review of the less familiar words to individual children at the beginning of the test: words most frequently reviewed were *codo* (elbow), *hombro* (shoulder), *telar* (loom), and *sandalia* (sandal).[26] Because the vocabulary review was not given to all children, I entered whether or not it was given into each child's record and later calculated the consequences using statistical analysis. Again, results are reported in section 7.4.

6.3.5 Compensation for Participation

School authorities and members of local parent councils gave permission for participation and expressed interest and support for the study. They were compensated for their participation in the form of school supplies, many of which

[26] Several regional Spanish variations and Quechua loan words were also noted in the children's responses to picture stimulii: the verbs *taocar* (to stack or place upon), *awar* (to weave), seemed to be loan words from Quechua, and children frequently substituted *abarcas* and *chancletas* for *sandalias*. Many of the children referred to a blanket as a *cama* (bed).

were donated by the staff and parent council of the Rafael Hernández School, a public two-way bilingual immersion program in Boston, Massachusetts. Children at the Rafael Hernández School also sent messages to the Bolivian children via letters, pictures and audiotape, and received letters and pictures from Bolivia in return.

7 Results for Correct Picture Selection Scores

7.1 Introduction

In this chapter I will report the results of statistical tests which will reflect on Bolivian monolingual and L2 Quechua-Spanish speaking children's grammatical competence via their ability to correctly choose among potential coreferents for a dative clitic. I will report results in the following order: in section 7.2 I will report the basic results for the monolingual group, in section 7.3 I will report the basic results for the second language group, and in section 7.4 I will report results for both groups on factors related to testing irregularities.

As stated in the previous chapter, the picture selection test was designed to evaluate whether there would be a significant difference in monolingual and L2 Spanish speaking children's ability to select the picture which correctly matched the object of the verb's action based syntactic factors (Within Subjects Factors) and on membership in a particular *Agegroup.* The Within Subjects Factor for correct scores, *Clitic Type,* had three levels, based on whether the sentential object was expressed as a reflexive clitic, oblique clitic or no clitic (full NP) argument. Each clitic type was further subdivided into one of two *Verb Types,* either ditransitive or transitive, assigning either a locative or possessor theta role to

cliticized objects, respectively. There were two *Tokens* of each sentence type. All Within Subjects Factors were coded as a compact variable in Statview v.5.0.1 with the following architecture:

Table 15. The Architecture of the Compact Variable for Scores Correct

Score Correct (= 1 level)
Clitic Type (Reflexive, Oblique, No Clitic = 3 levels)
Verb Type Error (Ditransitive, Transitive = 2 levels)
Token (1,2 = 2 levels)
TOTAL NUMBER OF CELLS AT LOWEST LEVEL: 2x2x3x1=12 Stimulus Sentences

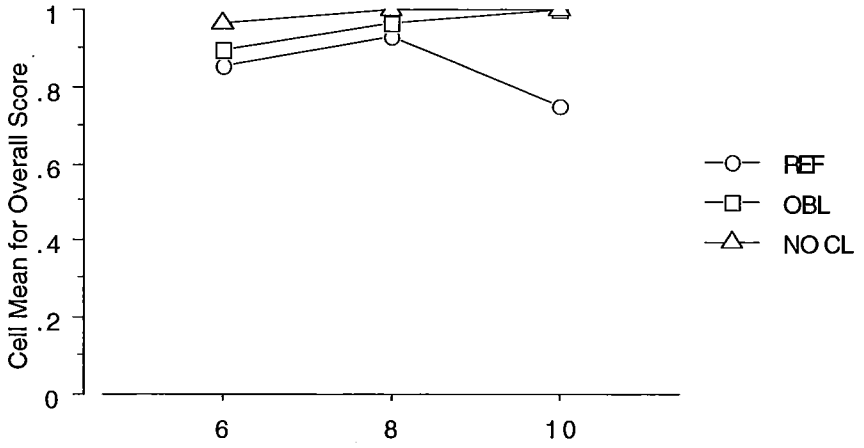
Because the groups tested were of varying size, I used the Tukey-Kramer procedure for all post hoc tests. The Tukey-Kramer method maintains the level of significance constant in Cases where group sizes vary (Hinkle, Wiersma and Jurs 1988:375). I set the level of significance at 5% for all tests. Since all statistics on the subjects' scores were calculated using a compact variable, all of the score ranges are expressed as a value from 0-1, with the number of trials per type reported next to the score range.

7.2 Monolingual Correct Picture Selection Scores

Results of a repeated measures analysis of variance (ANOVA) for success rate as differentiated by the Between Factor *Agegroup* suggested that levels of the Within Subjects Factor *Clitic Type* were significant in determining successful selection of

pictures in the task (F(2,24)=3.458, p=.0479). Scores for reflexives were slightly lower than those for obliques, declining most in the oldest age group. These results are shown in figure 12 and it associated table:

Figure 12. Monolingual Bolivian Spanish Mean Correct Picture Selection by *Clitic Type* and *Agegroup* (score range=0-1; trials per *Clitic Type*=4)



Type of anaphora	Agegroup: 6 years (n=7)	8 years (n=7)	10 years (n=2)
Reflexive	.85	.93	.75
Oblique	.89	.96	1.0
No Clitic	.96	1.0	1.0

A post hoc Tukey-Kramer procedure indicated that mean scores for Reflexive sentences were significantly different than those for No Clitic sentences, as shown

in table 16 below. It should be noted that there was no significant difference found between Reflexive and Oblique Clitic sentences.

Table 16. Tukey-Kramer Test for the Effect *Clitic Type* on Overall Correct Score Means in the Monolingual Population

	Mean Difference	Critical Difference	
REF, OBL	-.064	.105	
REF, NO CL	-.111	.105	S
OBL, NO CL	-.047	.105	

7.2.1 Comparison of Bolivian Monolinguals to Other Monolinguals

The overall picture that emerges of the monolingual children's performance is that their scores were close to perfect from the earliest age tested, suggesting that the clitics *le* and *se* and their abstract functional structure had been acquired by the children, and that the task of choosing among their possible co-referents was within the children's computational ability. There is no evidence for superior performance on reflexives over non-reflexive anaphoric elements (i.e. over oblique clitics).

Two conclusions can be drawn: first, these results indicate that the monolingual Bolivian group has analyzed the oblique locative and possessor clitics as resulting

from head-movement, if Baauw (1999) is correct in contending that only clitics resulting from head-movement should be exempt from the reflexive privilege effect. The second conclusion is that these results seem at odds with Padilla's finding of earlier superior performance on reflexive anaphors in his base study. One possible explanation for the discrepant results is that my picture selection task is simpler to process than Padilla's act-out task. Another possibility, which draws support Baauw's analysis, is that Padilla's sentences require children to compare a simple head-moved clitic to one that is bound within PP; the latter sentence type would not be exempt from the reflexive privilege effect.

I will conclude this section by summarizing that the monolingual Bolivian children I examined performed the picture selection task with nearly perfect results. There was no evidence of the reflexive privilege phenomenon in this population for the dative clitic structures tested. There was a slight depression of scores on reflexives in the oldest group, which will be revisited in the next chapter in which I analyze children's errors.

7.3 L2 Quechua-Spanish Correct Picture Selection Scores

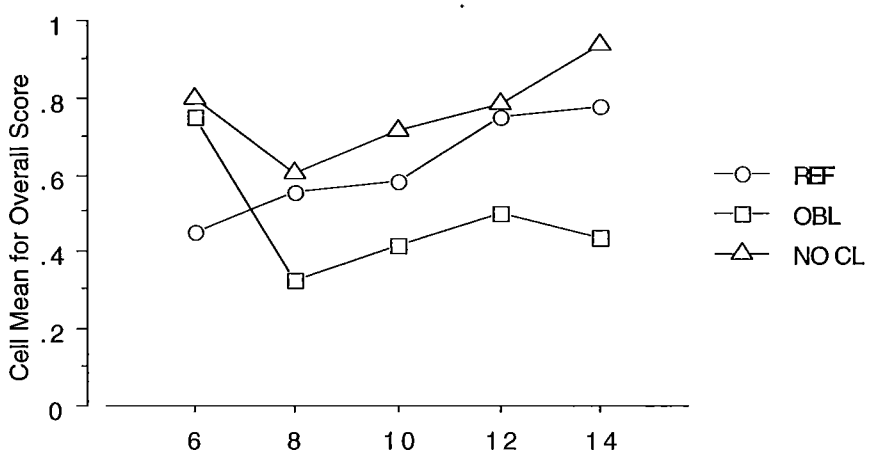
7.3.1 The Reflexive Privilege Effect in L2 Quechua-Spanish

In this section I will address the following question: do L2 Quechua-Spanish speakers show a reflexive privilege effect in the same syntactic contexts as monolingual speakers of the same chronological age? I will compare the findings for the L2 group to the monolingual Bolivian children's results reported above, as well as to other findings in the literature.

The L2 Quechua-Spanish group test scores were subjected to a repeated measures analysis of variance (ANOVA) for success rate as differentiated by *Agegroup.* According to the ANOVA, there were significant main effects for the Between Factor, *Agegroup*: ($F(4,78)=3.261$, $p=.0158$), and the Within Subjects Factors *Clitic Type*: ($F(2,156)=12.909$, $p<.0001$), and *Verb Type*: ($F(1,78)=5.484$, $p=.0217$). There was a significant interaction of the Within Subjects Factors *Clitic Type* x *Verb Type:* ($F(2,156)=4.039$, p.0195). There were no significant interactions with the Between Factor identified through the ANOVA.

The effects for *Agegroup* and *Clitic Type* are crucial to assessing whether this group exhibits reflexive privilege. Figure 13 and its associated table demonstrate that children above age 6 performed better on reflexives than on obliques:

Figure 13. L2 Quechua-Spanish Mean Scores Correct by *Agegroup* and *Clitic Type* (score range=0-1; trials per *Clitic Type*=4)



Type of anaphora	Agegroup: 6 yrs (n=5)	8 yrs (n=26)	10 yrs (n=38)	12 yrs (n=7)	14 yrs (n=8)
Reflexive	.45	.56	.58	.75	.78
Oblique	.75	.33	.42	.50	.44
No Clitic	.80	.61	.72	.79	.94

Scores on reflexives are higher than those for obliques except in agegroup 6; results for the 6 year olds will be discussed at the end of this section. The difference between overall scores on reflexives and obliques is statistically significant, as are differences among all combinations of the factor *Clitic Type*, as shown in table 17 below:

Table 17. Tukey-Kramer Test for the Effect *Clitic Type* on Overall Correct Score Means in the L2 Quechua-Spanish Population

	Mean Difference	Critical Difference	
REF, OBL	.181	.100	S
REF, NO CL	-.114	.100	S
OBL, NO CL	-.295	.100	S

If we abstract away from the scores of the 6 year old agegroup, the scores appear to improve across the board. However, the only score improvement that is of statistical significance according to a post hoc Tukey-Kramer procedure is that for No Clitic sentences between agegroups 8 and 14 (Mean Diff.=-.332, Critical Diff.= .272). Therefore, I will argue that the 8-14 year old scores could be considered to portray a single stage of grammatical development in which reflexive privilege is exhibited.

If this is so, then it would appear that the 8-14 year olds have not analyzed the oblique clitics as resulting from head-movement, unlike monolingual Bolivian children of the same age. This conclusion is dependent on Baauw's particular analysis. Independent of the analysis adopted, we have evidence of a clear difference between monolingual Bolivian Spanish and L2 Quechua-Spanish children's performance regarding reflexive privilege. It must be noted that despite equivalence in chronological age, the L2 group is at an earlier stage of

development of the target grammar, due to its reduced years of exposure to the target.

Why would the 8-14 year old L2 Quechua-Spanish group perform worse on oblique clitics than on reflexives? If we pursue Baauw's line of analysis, it is interesting to note that the child's realization that the clitic results from head-movement requires knowledge that the clitic appears in a position (directly left-adjacent to the verb) in which Spanish object NP's are not typically allowed. Since Quechua is an OV language, and OV constructions occur with higher frequency in contact varieties of Spanish (cf. Ocampo and Klee, 1995), it may be the case that these children do not have sufficient evidence that Spanish is a VO language to trigger a head-movement analysis for oblique clitics. This would amount to claiming that L2 Quechua-Spanish children ages 8-14 have analyzed oblique clitics as object pronouns or something other than head-moved elements.

There is a theory-neutral, although less powerful, way to explain the difference between the monolingual Bolivian children's performance, and the L2 group's performance. The explanation is as follows: assuming no difference in abstract representation of functional structure between the two populations, reflexive clitic sentences should be easier to process than oblique clitic sentences, because the reference of the reflexive clitic is realized in a more local domain. In other words,

children experiencing an additional processing burden (due to factors induced by taking a test in a foreign language) may be biased in favor of a reflexive interpretation for clitics, as reflexive reference is satisfied within the sentence, while oblique reference must be satisfied outside the sentence. This explanation resembles Deutsch, Koster and Koster's (1986) explanation of their results, but does not account for the subtleties in the rest of the studies reported.

The 6 year old agegroup results are difficult to account for. This group performed worse on reflexives and than they performed on obliques; however, according to a post hoc Tukey-Kramer procedure for the effect of clitic type on overall scores within this agegroup, the difference between reflexive and oblique scores within agegroup 6 was not significant. The 6 year old population sampled was relatively small (n=5). Nevertheless, results for this group were not concentrated by school nor by interviewer, which suggests that the anomaly may be of interest for future study.

7.3.2 Conclusions on the Reflexive Privilege Effect in Child L2 Quechua-Spanish

I conclude this section by noting that the L2 Quechua-Spanish speakers in agegroup 8-14 exhibit a reflexive privilege effect unlike the Spanish monolinguals in this study and in Baauw, Philip and Escobar (1997.) The results more closely

resemble those obtained by Padilla (1990), Deutsch, Koster and Koster (1986) and Chien and Wexler (1990) in which performance was superior on reflexive rather than non-reflexive anaphoric elements at an intermediate stage of child language development.

I have suggested that the similarities among the L2 Spanish-Quechua group and the Deutsch, Koster and Koster (1986), Chien and Wexler (1990) and Padilla (1990) findings may stem from the fact that knowledge of the syntactic structure of these elements makes processing simpler for the reflexive element, which is resolved in a more local domain than the oblique element. On the other hand, the differences among these findings and those of the monolingual Bolivian Spanish group I tested, plus the findings of Baauw, Philip and Escobar(1997) and Baauw (1999) could be given a unified explanation if it were true that L2 Quechua-Spanish children have not analyzed object clitics as head-moved elements. It remains to be seen whether this attractive explanation is empirically accurate.

A question remains about the earliest stage for the L2 Quechua-Spanish group. In other studies, children at the earliest stages performed relatively poorly on resolving the reference of both reflexive and non-reflexive pronominals. The Quechua-Spanish children here show a dramatically different result: scores for obliques are elevated to the highest level attained by the group, and scores for

reflexives appear relatively depressed. Further descriptive statistics are offered in Appendices E and F so that the reader may assess these results. I will return to discussion of the 6 year old group in the chapter on error analysis.

7.3.3 Assessing the Feature Transfer Hypothesis

In this section I will address the following questions:

1) At some stage in development, do Bolivian L2 Quechua-Spanish speakers comprehend *le* as a possessor object marker when there is no genitive marking expressed in a sentence as in Quechua?

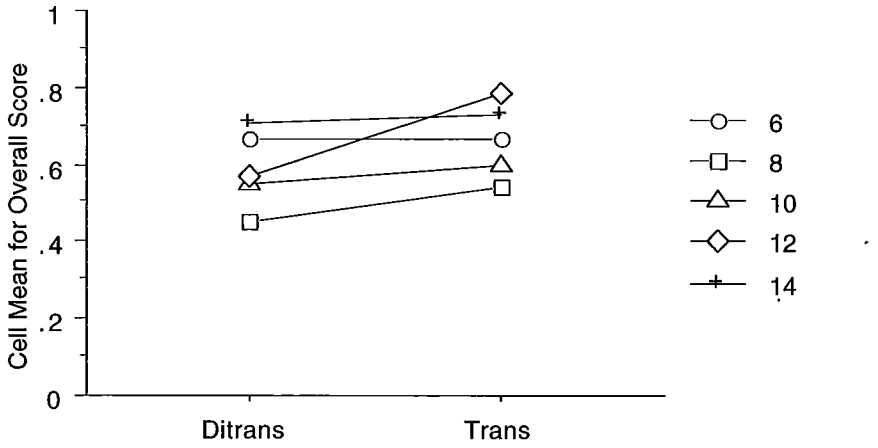
2) If the answer to (1) is yes, does this ability to comprehend dative possessor clitics occur later in development than the comprehension of dative locative clitics, for which there is no Case mismatch between L1 and target?

I will compare the child L2 speakers' performance on ditransitive(locative) vs. transitive(possessive) sentences in order to test the hypothesis that functional features are transferred from Quechua to Spanish at an early stage of acquisition. As noted above, a repeated measures analysis of variance (ANOVA) for success rate as differentiated by *Agegroup* revealed a significant Within Subjects effect for *Verb Type*: ($F(1,78)=5.484$, $p=.0217$). There were no significant interactions between *Agegroup* and *Verb Type* identified through the ANOVA. The essential

question to determine at this point is the nature of the difference in scores along the variable *Verb Type*.

A simple means table shows us the answer. At all agegroup levels, L2 Quechua-Spanish speakers' performance on transitive(possessor) sentences was better than or equal to their performance on ditransitive(locative) sentences, as shown in figure 14 below:

Figure 14. L2 Quechua-Spanish Mean Scores Correct by *Verb Type* and *Agegroup* (score range=0-1, trials per *Verb Type* =2)



This result provides initial evidence against the hypothesis that functional features transfer from the L1 to L2 grammar at an early stage of development, if we assume that the L1 and target are more closely matched at the level of functional feature specification in the ditransitive(locative) context than in the transitive(possessor) context. The difference between mean scores on ditransitive and transitive sentences is statistically significant, as the following Tukey-Kramer results indicate:

Table 18. Tukey-Kramer Test for the Effect *Verb Type* on Overall Correct Score Means in the L2 Quechua-Spanish Population

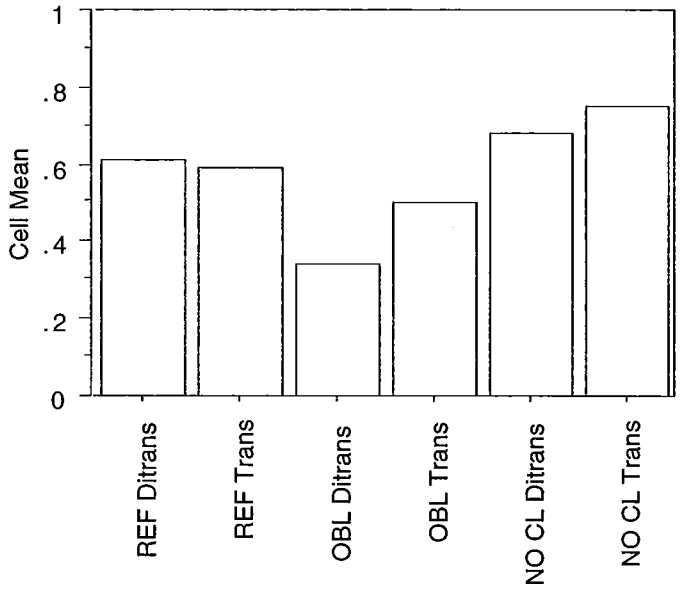
	Mean Difference	Critical Difference	
Ditrans, Trans	-.070	.048	S

I will now examine how the results are distributed when factors interact.

7.3.4 The Interaction of *Clitic Type* and *Verb Type* on Overall Scores

There was a significant interaction of Within Subjects Factors *Clitic Type* x *Verb Type* revealed in the ANOVA: (F(2,156)=4.039, p.0195). The bar chart in figure 15 overleaf demonstrates this effect graphically:

Figure 15. L2 Quechua-Spanish Mean Scores Correct by *Sentence Type* (*Clitic Type x Verb Type*)



I will examine the interaction by looking in turn at each level of *Clitic Type.* In the reflexive context, there was no statistically significant difference in performance by *Verb Type*, as shown by the following post hoc results:

Table 19. Tukey-Kramer for the Effect *Verb Type* on *Reflexive* Correct Score Means in the L2 Quechua-Spanish Population

	Mean Difference	Critical Difference
Ditrans, Trans	.018	.080

On the other hand, in the oblique context, performance is better at all ages on the transitive sentences than on the ditransitive sentences. This effect is statistically significant according to a Tukey-Kramer procedure reported in table 20 below:

Table 20. Tukey-Kramer for the Effect *Verb Type* on *Oblique* Correct Score Means in the L2 Quechua-Spanish Population

	Mean Difference	Critical Difference	
Ditrans, Trans	-.163	.087	S

One might argue that the children's performance on transitive sentences was superior because the No Clitic transitive sentences are simpler to parse than the No Clitic ditransitive sentences; assuming that by process of elimination, selection within the transitive picture sets would be simpler. I will repeat examples of the transitive No Clitic sentences here for comparison with the ditransitive No Clitic sentences:

(76) José lava los platos. (Transitive)
José washes the dishes

(77) Ana pone el bulto en el suelo. (Ditransitive)
Ana puts the bundle on the floor

The transitive No Clitic sentences are shorter than their ditransitive No Clitic counterparts, and they also involve a change in direct object within the picture set (all other pictures within the set refer to a possessee object of the human possessor object). The ditransitive picture sets involve no such change of direct object.[27] It turns out, however, that there was no significant difference in children's ability to select the transitive vs. ditransitive No Clitic pictures. The following post hoc test results bear this out:

Table 21. Tukey-Kramer for the Effect *Verb Type* on *No Clitic* Correct Score Means in the L2 Quechua-Spanish Population

	Mean Difference	Critical Difference
Ditrans, Trans	-.066	.083

Therefore, the objection cannot be maintained that the children's superior performance on Oblique transitive sentences was due to their superior ability to rule out the No Clitic transitive sentences.

[27] This design decision in the possessor picture sets was necessary, in order to avoid introducing further animate (highly salient) arguments in the sets, as in (b):
a) José le lava los pies (a Ana)
b) José lava los pies del amiguito

How did the children's performance on each sentence type compare to the behavior expected if they simply selected pictures at random? Results of a one sample t-test with hypothesized mean set at chance (.33%) level showed that theL2 Quechua-Spanish children performed above chance on all but the oblique ditransitive sentences, as shown in table 22:

Table 22. L2 Quechua-Spanish t-Test results (Hypothesized Mean is .33%)

	Mean	DF	t-Value	P-Value
Reflexive Ditransitive	.608	165	7.327	<.0001
Reflexive Transitive	.590	165	6.801	<.0001
Oblique Ditransitive	.337	165	.200	.8420
Oblique Transitive	.500	165	4.367	<.0001
No Clitic Ditransitive	.681	165	9.664	<.0001
No Clitic Transitive	.747	165	12.321	<.0001

The question then arises: why was performance so low on oblique ditransitive sentences? The problem cannot be isolated to the features of the clitic *le*, as *le* is interpreted with relative success in the transitive context. Furthermore, the problem cannot not be familiarity with the verbs used, as the same verbs were interpreted successfully in other contexts.

I have assumed that the interpretation of the clitic *le* in the oblique locative context should be facilitated by L1 feature transfer and that interpretation in the

oblique possessor context should be more difficult due to a conflict of Case contingencies between L1 and target. These data, in which the L2 children performed worse on oblique locative clitic sentences than on oblique possessor clitic sentences, present an interesting challenge to this hypothesis.

The feature transfer hypothesis might be rescued in the face of these data by suggesting as I did earlier that the high frequency of OV sentences in the children's input has discouraged the children from interpreting *le* as the result of a head-movement process. We would then have difficulty explaining children's relative success at interpreting *le* in the possessor raising context. If we were to maintain the feature transfer view, we would also have to suggest that *le* may be interpreted by these children as a genitive and not dative element in the transitive/possessor context (comparable to the genitive clitic *lo* proposed by Camacho, Paredes and Sánchez 1995.)

Thus, the data do not provide straightforward and uncomplicated evidence of initial state functional feature transfer from L1 to L2 under the analysis for these structures that I have proposed in earlier chapters.

An alternative explanation for the surprising finding that children performed better on the sentences for which L1 and target do not match, and poorly on the

sentences for which they do match, relates to the salience of unmatched structures. It could ultimately be the case that the more different the target structure is from its L1 correlate, the more salient it is and the more quickly the unmatched functional features are acquired. This explanation does not require the assumption that L1 features determine the initial state of the L2 grammar, but rather, it assumes that L1 feature specifications are retained separately and may be consulted for (conscious or subconscious) comparison by child L2 acquirers.

7.4 Irregularities in Testing Conditions and Administration

As stated in chapter 7 section 3.4, in all of the schools where children were interviewed by Kalt, i.e. all except Pisily, there were irregularities in the picture selection task administration due to irregular availability of a quiet testing space and due to the fact that the interviewer administered a brief vocabulary review to some children and not others. These irregularities were entered in children's records on a yes/no basis in terms of 1) whether the interviewer repeated the audio stimulus on more than two test sentences during a trial; 2) whether the interviewer reviewed test vocabulary with the child during the pretest.

7.4.1 The Influence of Repeating the Stimulus Sentence

The conditions under which some tests were administered led me to repeat the stimulus if a child showed a reaction that indicated she/he had not heard the audiotape. The stimulus was repeated with the same intonation as that used on the tape. If I repeated the stimulus on more than two sentences during a trial, a positive value was entered in the child's record for the variable *Repeated Stimulus*.

A repeated measures ANOVA for the effects of *Repeated Stimulus Review* on all children interviewed by Kalt yielded the following result: there was no significant main effect for *Repeated Stimulus* ($F(1,65)=1.299$, $p=.2586$) and there were no significant interactions between *Repeated Stimulus* and the scores correct at any level.

7.4.2 The Influence of Vocabulary Review

As stated in section 6.3.4, the words most frequently reviewed during the pretest were *codo* (elbow), *hombro* (shoulder), *telar* (loom), and *sandalia* (sandal). A repeated measures ANOVA for the effects of *Vocabulary Review* on all children interviewed by Kalt yielded the following results: there was no significant main effect for *Vocabulary Review* ($F(1,65)=2.559$, $p=.1145$); there were no significant interactions between *Vocabulary Review* and the scores correct at any level.

7.4.3 Interactions Involving Tokens

The Correct Score ANOVA for the L2 Quechua-Spanish population showed that there was no main effect for individual *Tokens* of any test sentence type and no significant interaction among the levels of *Agegroup* and *Tokens*. However, there were significant interactions among the Within Subjects Factors *Clitic Type* x *Tokens* ($F(2,156)=3.921$, $p=.0218$) and *Clitic Type* x *Verb Type* x *Tokens* ($F(2,156)=8.327$, $p=.004$). Since the levels of *Tokens* were assigned at random and the order of presentation was distributed equally in two opposing batteries, this result is difficult to interpret.

A test with a greater number of tokens might have lessened significant results being associated with individual tokens; nevertheless, I presented a short test to maximize the possibility of maintaining the children's full attention, and minimize the impact of pulling them out of class.

An important question to assess is whether there were extra-linguistic factors which influenced children's performance on individual tokens, creating a significant differences on the scores between any pair of tokens. Appendix G is included for the assessment of this question.

7.4.4 Summary of Spurious Effects

In summary, the effects of irregular test administration by interviewer Kalt were insignificant in determining the children's scores correct. There was an unexpected significant interaction of *Tokens* with other Within Subjects Factors, which is difficult to interpret.

8 Picture Selection Error Analysis

8.1 Introduction

In this chapter I will bring analysis of children's errors from the picture selection task to bear upon questions left unresolved by analysis of their correct choices. I will begin by presenting design and coding considerations in section 8.2. In section 8.3 I will discuss the evidence to brought to bear on the following question for each population tested:

1) At agegroup levels which significantly differed from others within the population,

a) was there a qualitative difference in the types of errors made?

b) was there a quantitative difference in the types of errors made?

8.2 Design Considerations on Error Scores

Children who did not select the correct picture for a stimulus were restricted by the task to committing one of three possible errors: either they did not respond at all, or they pointed to one of the other two pictures on the page. For example, if a child heard the stimulus sentence in (78) below:

(78) José$_i$ se$_i$ lava los pies
'José washes his feet'

the child could commit the error of not responding, or of pointing at the picture in which José washes Ana's feet, or of pointing at the picture in which José washes a plate. There is no other error available; for example, the child may not choose a picture representing a different verb type, for that is not presented within the set.

Error scores, like correct scores, were coded under a compact variable in Statview v. 5.0.1. The architecture of the compact variable is as follows:

Table 23. The Architecture of the Compact Variable for Error Scores

Error Score (= 1 level)
Clitic Type (Reflexive, Oblique, No Clitic = 3 levels)
Verb Type (Ditransitive, Transitive = 2 levels)
Error label (No Response, a, b = 3 levels)
Token (1,2 = 2 levels)
TOTAL NUMBER OF CELLS AT LOWEST LEVEL: 2x3x2x3x1=18 Possible Responses to the 12 Stimulus Sentences Given

The same procedures as reported in the last chapter were followed here: I used the Tukey-Kramer procedure for all post hoc tests due to varying group size. The level of significance was held at the standard 5% for all tests. Since all statistics on the Within Subjects Factors were calculated using a compact variable, all of

the score ranges are expressed as a value from 0-1, with the number of trials per type reported next to the score range.

There were three levels of the variable under which these data were coded: *Error label (No response, a,b)*. The error of No response has meaning regardless of context, but the labels *a* and *b* were assigned differently within picture set contexts; *a* could mean 'chose the picture with oblique action', 'chose the picture with reflexive action' or 'chose the No Clitic picture', depending on the actual picture set. These three labels were multiplied by the six sentence types (*Clitic Type*(3) x *Verb Type*(2)) to create 18 unique error response types. Thus, there are 18 levels of the compact variable *Error Response type* (*Clitic Type* x *Verb Type* x *Error label*), which are presented in the following table:

Table 24. Error Response Types

Error Label	Stimulus (Clitic Type x Verb Type)	Response
No response	Heard REF.Ditrans	Chose No response
a	Heard REF. Ditrans	Chose OBL. Ditrans
b	Heard REF. Ditrans	Chose No Clitic. Ditrans
No response	Heard REF.Trans	Chose No response
a	Heard REF. Trans	Chose OBL. Trans
b	Heard REF. Trans	Chose No Clitic. Trans
No response	Heard OBL.Ditrans	Chose No response
a	Heard OBL. Ditrans	Chose REF. Ditrans
b	Heard OBL. Ditrans	Chose No Clitic. Ditrans
No response	Heard OBL.Trans	Chose No response
a	Heard OBL. Trans	Chose REF. Trans
b	Heard OBL. Trans	Chose No Clitic. Trans

Table 24 (continued)

Error Label	Stimulus (Clitic Type x Verb Type)	Response
No response	Head No Clitic. Ditrans	Chose No response
a	Heard No Clitic. Ditrans	Chose OBL. Ditrans
b	Heard No Clitic. Ditrans	Chose REF. Ditrans
No response	Heard No Clitic.Trans	Chose No response
a	Heard No Clitic. Trans	Chose OBL. Trans
b	Heard No Clitic. Trans	Chose REF. Trans

In the previous chapter I have given results of statistical tests involving the subterms *Clitic Type, Verb Type,* and *Token.* Therefore, the only results which are not redundant are those of *Error label,* and variables involving the product of *Error label* with the other subterms.

8.2.1 Monolingual Spanish Picture Selection Errors

The Monolingual Spanish group had nearly perfect scores. Results of a one factor repeated measures analysis of variance (ANOVA) for error rate as differentiated by *Agegroup* suggested that levels of the factor *Clitic Type* were significant in determining erroneous selection of pictures in the task ($F(2,24)=3.458$, $p=.0479$). This result is redundant with that for the correct score values. There was also a non-redundant significant effect for *Error label* ($F(2,24)=3.591$, $p=.0432$) A post hoc Tukey-Kramer procedure revealed that the error score of *No response* was significantly different than that of *Label a* errors. This is shown in table 25 below:

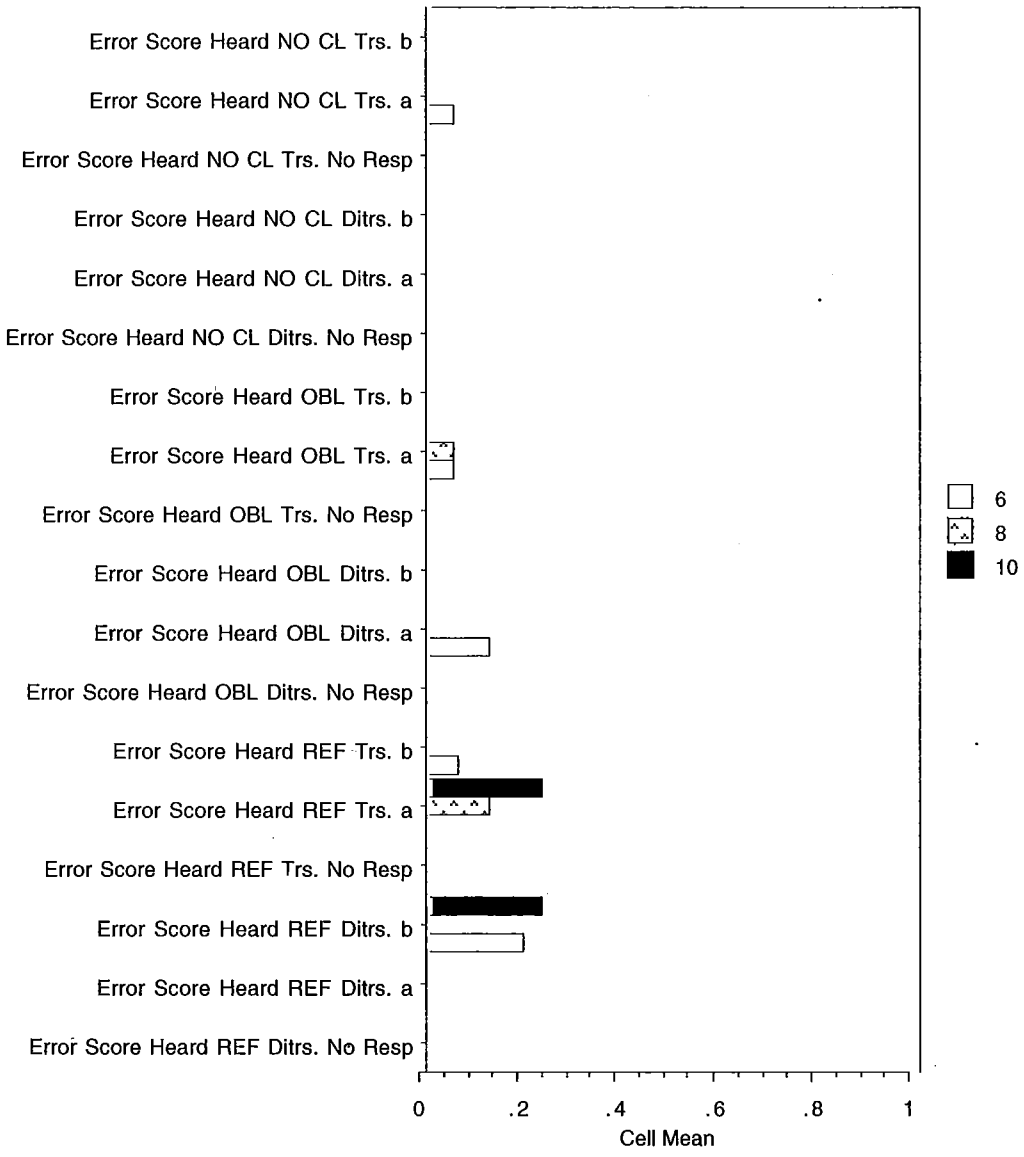
Table 25. Tukey-Kramer for the Effect *Error Label* on Overall Error Score Means in the Monolingual Population

	Mean Difference	Critical Difference	
No Response, Label a	-.044	.036	S
No Response, Label b	-.022	.036	
Label a, Label b	.022	.036	

There were zero errors of No Response counted throughout the tests on monolingual children. This value was significantly lower than errors of Label a. There were so few errors overall within this population that I will attribute no importance to the fact that No Response was not significantly different from errors of Label b. The lack of significant difference among errors of Label a and b is expected, since these labels were assigned at random.

The overall error patterns of this group are shown in figure 16 (overleaf) and can be summarized as follows: the most frequent error committed by the monolingual group was to choose a No clitic picture when hearing a Reflexive.Ditransitive sentence. Next in frequency was the selection of an oblique picture when hearing a Reflexive.Transitive sentence. In the following subsection I will discuss the monolingual children's utterances associated with these errors.

Figure 16. Overall Monolingual Spanish Error Scores



8.2.2 Monolingual Children's Utterances Associated with Errors

Although the monolingual children's scores were almost perfect, I chose to examine the kinds of production data that accompanied selection errors. Errors on reflexive stimulii were of special interest because of the score depression in the oldest agegroup. In considering the utterances of children when looking at the picture set, I assessed three things: why the child did not point at the correct picture, why the child pointed at the incorrect picture, and whether or not the child is able to use clitics correctly in the other utterances.

The children who heard a Reflexive Ditransitive sentence and chose the No Clitic picture did so only in association with one picture set. They heard the following sentence:

(79) Ana se pone el bulto
'Ana puts the bundle on'

and pointed at a picture intended to depict Ana putting the bundle down. This picture set appears in Appendix B. After children had made their selection, the interviewer asked what Ana was doing in each of the other pictures. When pointing to the reflexive picture, children uttered the sentences listed in table 31:

Table 26. Monolingual Children's Utterances Who Heard *Reflexive Ditransitive*, Chose *No Clitic*

Subj#	Reflexive Ditransitive Picture	Oblique Picture
1	se pone el bulto y se está yendo 'she puts the bundle on and she's leaving'	se pone el bulto a José 'the bundle is being put on José'
9	está ya con el bulto 'she already has the bundle on'	aquí a su hermano le está poniendo el bulto diría a José 'here she's putting the bundle on her brother, I mean on José'
61	sacando el bulto [tape dysfunction...] ya está con el bulto	ayuda a poner el bulto
64	está llevando el bulto	le está haciendo llevar a José

It appears that all four subjects attributed the action of Ana putting the bundle on to the picture intended to depict Ana putting the bundle down, which is an error independent of grammatical significance. Clearly, for example, subject #1 knows how to produce reflexive clitic sentences correctly. It is interesting that when pointing to the oblique picture, subject #1 uses the clitic *se* in a non-reflexive function; perhaps the intention is the impersonal use of *se*. Subjects 9 and 64 use the oblique clitic productively.

The children who heard a Reflexive Transitive sentence and chose the Oblique picture heard the following sentence:

(80) José se toca el codo
'José touches his elbow'

and pointed at a picture intended to depict José touching Ana's elbow. After children had made their selection, the interviewer asked what José was doing in each of the other pictures. When pointing to the reflexive picture, children uttered the following sentences:

Table 27. Monolingual Children's Utterances Who Heard *Reflexive Transitive Token 1*, Chose *Oblique*

Subj#	Reflexive Transitive Picture	No Clitic Picture
1	se está sentando Ana y xxx está diciendo toma asiento 'Ana is sitting herself down and xxx is saying take a seat'	hay un a-, un asientito y, y está mostrando un, un libro José 'There is a little seat and José is showing a book'
8	José **se** toca el codo 'José touches his elbow'	José toca el libro 'José touches the book'
60	su bra-, el tiene un chinché en su brazo 'he has a bruise on his arm'	está tocando el libro 'he is touching the book'

Subjects 1 and 8 use reflexive *se* correctly and also correctly describe the no clitic picture. It is not clear why they have pointed at the picture of José touching Ana's elbow. No children committed the error of hearing this sentence and pointing at the picture of José touching the book.

Finally, I consider children who heard the following sentence:

(81) Ana se lava las manos
'Ana washes her hands'

One of them chose the oblique picture in which Ana was washing José's hands, and the other, the no clitic picture in which Ana was washing a cup.

Table 28. Monolingual Children's Utterances Who Heard *Reflexive Transitive Token 2*, Chose *Oblique* and Heard *Reflexive Transitive Token 2*, Chose *No Clitic*

Subj#	**Reflexive Transitive Picture**	**Oblique Picture**
2	mojando un trapo 'wetting a rag'	mojando a sus manos 'wetting his/her hands'
Subj#	**Reflexive Transitive Picture**	**No Clitic Picture**
60	está...mmcosu...agarrando jabón...con su mano 'she's...grabbing soap with her hand'	está lavando el trapo 'she's washing the rag'

Although these children do not use clitics in the above utterances, their picture descriptions are perfectly plausible.

To summarize this section: there is evidence from the monolingual children's utterances that in the small number of cases in which they did not choose the reflexive picture as anticipated, several of their errors appeared to have an extra-

grammatical basis. Furthermore, the same children produced reflexive and oblique clitics in their own utterances. There is one remaining mystery: why some children interpreted or produced reflexive clitics in an apparently oblique context. My provisional explanation is that they used the clitic *se* in one of its non-reflexive functions, such as the impersonal.

8.2.3 L2 Quechua-Spanish Picture Selection Errors

Within the L2 Quechua-Spanish group, the most frequent errors were:

a) Heard Oblique Ditransitive (locative), Chose Reflexive
b) Heard Oblique Ditransitive (locative), Chose No Clitic
c) Heard Oblique Transitive (possessive), Chose Reflexive

The L2 Quechua-Spanish group showed significant results on both Between and Within Subjects Factors for error scores. Results of a repeated measures analysis of variance (ANOVA) for *Error Score* as differentiated by the Between Factor *Agegroup* showed identical main effects to those reported in the previous chapter for correct scores. In addition to these redundant effects, there was a significant effect for *Error labels* ($F(2,156)=23.653$, $p=<.0001$). A post hoc Tukey-Kramer procedure revealed that the error score of No response was significantly different than errors of type a and b, but errors of type a were not significantly different

from errors of type b. This result is expected because No response is the only kind of error that had a fixed value overall; the others were assigned at random within clitic types. The Tukey-Kramer results are shown in table 34 below:

Table 29. Tukey-Kramer for the Effect *Error Label* on Overall Error Score Means in the L2 Quechua-Spanish Population

	Mean Difference	Critical Difference	
No Response, Label a	-.222	.056	S
No Response, Label b	-.192	.056	S
Label a, Label b	.030	.056	

Here I will report the other significant effects from the ANOVA table:

Table 30. L2 Quechua-Spanish Error ANOVA Results: *Clitic Type* and *Verb Type* combined with *Error Labels*

Within Factor Interactions	**Significance**
Clitic Type x *Error label*	F(4,312)=11.076, p <.0001
Verb Type x *Error label*	F(2,156)=5.294, p=.0060

Interestingly, there was no significant effect on *Error Response type*, the interaction of Within Factors (*Clitic Type* x *Verb Type* x *Error label*), as shown in table 31:

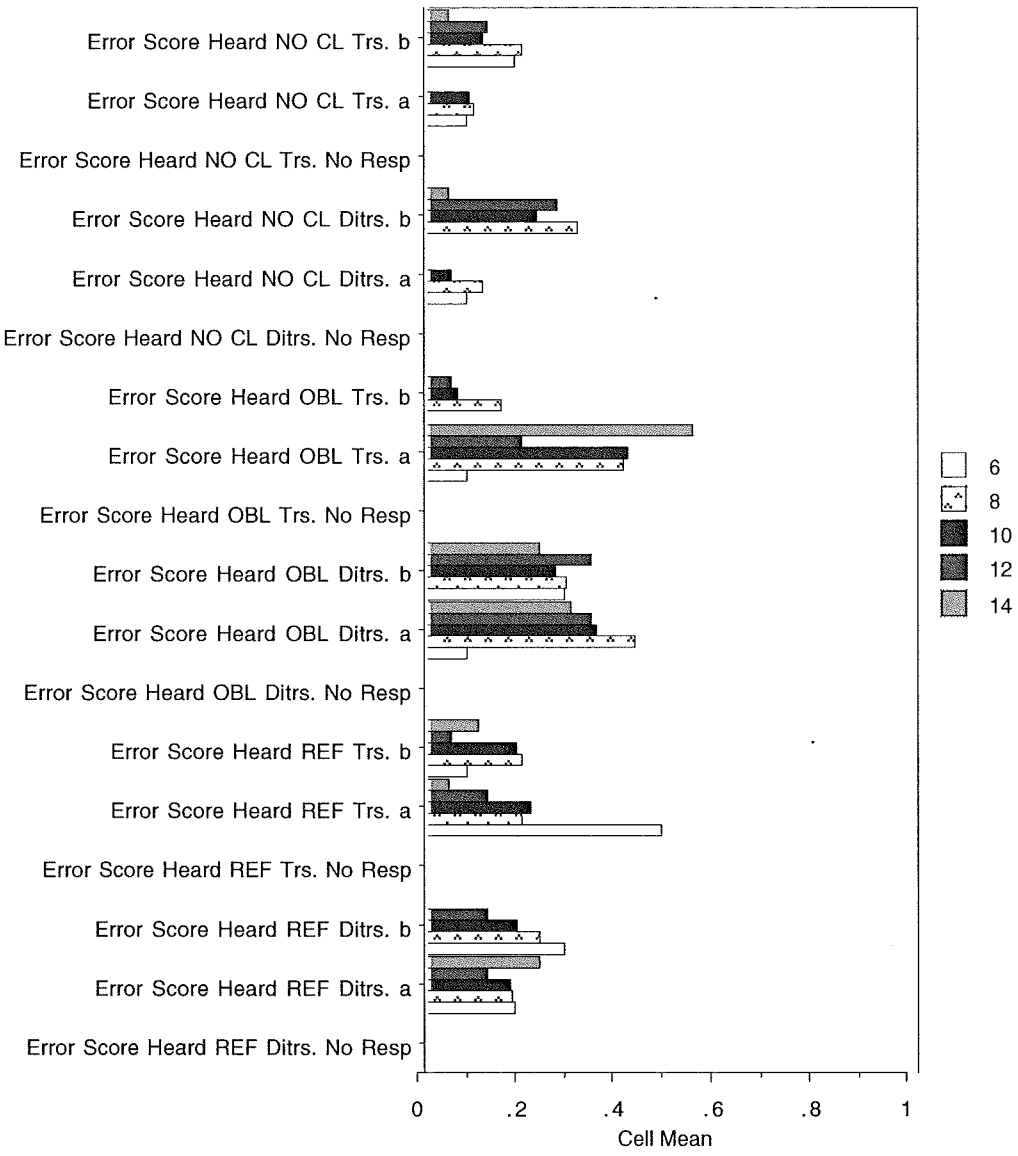
Table 31. L2 Quechua-Spanish Error ANOVA Results: *Error Response Type*

Within Subjects Factor	**Significance**
Error Response type	F(4,312)=2.013, p=.0925

I attribute the lack of significance of *Error Response type* to the fact that there were eighteen different levels of this type, making it hard to achieve significance.

Nonetheless, the interaction bar chart in figure 17on the next page gives a visual cue as to the trends in children's error response types. I will break the error response type results down into smaller groups in the next section of this chapter in order to evaluate whether there is a qualitative or quantitative change in the error responses of the six year old agegroup in comparison to the older L2 Quechua-Spanish speakers.

Figure 17. Overall L2 Quechua-Spanish Error Scores



8.3 Analysis of Changes in Erroneous Choices By Age

In the previous chapter I established that there was an anomaly in the six year old group's scores on oblique clitics; the six year olds did better on obliques than on reflexives, and better on obliques than the children in the older agegroups. Although these results were of questionable significance due to the small number of children in the group, I would like to investigate here whether the six year olds showed any qualitative differences on erroneous choices with regard to their older counterparts.

By examining the chart on the previous page, it is possible to determine that the most frequent error for 6 year olds when hearing the Oblique Transitive stimulus was to choose the Reflexive drawing. Their older counterparts chose the same drawing when presented with this stimulus type, but at a higher rate, and the older children also chose the No clitic drawing, which the six year olds did not choose at all for this stimulus type. Therefore, although the results are tentative at best, it appears that the 6 year olds were more restricted in what they thought was a possible alternative to the actual correct answer. This alternative happened to be the reflexive picture.

8.3.1 Analysis of the Six Year Olds' Oblique Production Data

It occurred to me that the 6 year olds might have had an elevated score because they had ruled out a possible interpretation of a stimulus based on characteristics of the picture rather than the sentence. One of the pictures, in which the correct answer is that Ana is washing José's face (an Oblique Transitive context) had especially high performance for the six year olds above all the other children. I recalled that when looking at that picture set, a number of children had produced the utterance 'Está llorando' (She is crying) when looking at the reflexive picture. Perhaps if more of the six year olds than the older children had interpreted the reflexive picture this way, it would indicate that they had a bias toward choosing the correct answer because they would have eliminated one of the incorrect answers for non-linguistic reasons.

I checked the production data with this hypothesis in mind, but found that none of the six year olds had uttered "Está llorando" when viewing the set. Therefore, this hypothesis must be ruled out as an explanation of their elevated scores.

9 Conclusion

In this thesis I have given empirical content to the thought-experiment developed in the introduction: I have tested the second language acquisition of a pronominal element whose functional specification is matched in L1 and target in various syntactic contexts, but whose expression in the L1 is phonetically null. This element is the dative clitic *le*, which functions as a third person object agreement morpheme on the verb in Spanish; third person object agreement is phonetically null in Southern Quechua. I have claimed that Quechua speaking children's knowledge with regard to *le* cannot be traced to translation of the surface properties of L1.

Just what do monolingual Spanish and L2 Quechua-Spanish speaking children know about the interpretation of the dative clitic *le*? I have tested monolingual and L2 Bolivian Spanish-speaking children's ability to interpret the reference of the dative clitic in a cross-sectional study that made use of two contrasts: a contrast in clitic type (oblique, reflexive, no clitic) and a contrast in verb/object type (ditransitive/locative, transitive/possessive.) Children's comparative performance at various ages on these contrasting sentence types allowed me to make inferences about their grammatical competence at various stages, and to

address the controversial notions of reflexive privilege and initial state feature transfer in first and second language acquisition.

I found no evidence of superior performance on reflexive over oblique clitics among monolingual Bolivian children ages 5,0-10,11 (years, months.) Scores were nearly perfect from the earliest agegroup tested, with a slight depression in reflexive scores in the oldest agegroup. I concluded that these data support Baauw's (1999) contention that clitics resulting from head-movement are immune to the reflexive privilege effect.

I suggested that Padilla's (1990) finding of a reflexive privilege effect in his base study of Spanish children may have stemmed from the fact that the sentences he employed involved comparison between a head-moved and non-head-moved clitic co-indexed within PP. Another possible cause of divergence between my finding at that of Padilla's is that in situations which impose a heavy processing load on children, the reference of reflexive elements is easier to identify than the reference of non-reflexive elements, simply because children's knowledge of syntactic structure allows them to resolve reflexive reference in a more local domain than that of non-reflexive elements. Padilla's act-out task may well have imposed a heavier processing load than my picture selection task.

I investigated whether L2 Quechua-Spanish children of roughly the same chronological age exhibit a reflexive privilege effect at an early stage of their linguistic development. The 6 year old L2 group scored relatively high on oblique clitics and low on reflexives, for which I have no explanation. Surprisingly, the 8-14 year olds did exhibit a reflexive privilege effect, unlike the monolingual Bolivian group, allowing a reflexive interpretation not only of reflexive clitics but also oblique clitics. This result resembles the effect exhibited by monolingual acquirers of Spanish (Padilla 1990), Dutch (Deutsch, Koster and Koster 1986), Baauw (1999) and English (Chien and Wexler 1990).

I claim that the finding of a reflexive privilege effect among L2 Quechua-Spanish speakers may be attributable to one of two factors. It may be that these children have configured their L2 grammar in a target-like fashion, and that this knowledge allows them to resolve the reference of reflexives more easily than that of non-reflexives because reflexive reference is resolved within the sentence rather than outside it. This argument implies that reflexive privilege is primarily a function of structurally-informed processing mechanisms, and surfaces when children's processing abilities are taxed. Since these children are of roughly the same age as the monolingual Bolivian group, there is an added implication that taking a test in a second language imposes a higher processing load than taking it in L1.

The other possibility I have suggested, following Baauw (1999), is that the L2 Quechua-Spanish group is not exempt from the reflexive privilege effect because it has not analyzed the clitic as having resulted from head-movement. In order to distinguish the clitic from a free-standing pronoun, children must know that the position immediately left-adjacent to the verb is not a canonical object position in Spanish. This may be difficult for L2 Quechua-Spanish speakers to establish, given the high frequency of OV sentences in the contact variety of Spanish they would be exposed to.

Further study is warranted to determine which explanation is empirically preferable. In either case, the findings regarding Bolivian children's performance on reflexive and oblique clitics concord with Lakshmanan's (1994) observation that investigation of child second language acquisition provides insight into theories of monolingual acquisition and not just vice versa.

The next contrast investigated in this dissertation tested the hypothesis that functional features from L1 transfer in the initial state to the L2 grammar. I claimed that if straightforward feature transfer were to hold, we would expect that Quechua-speaking children should perform better on the interpretation of sentences involving a dative locative object of a ditransitive verb than on sentences involving a dative possessor object of a transitive verb, because the

former are matched in L1 and target in terms of Case and agreement contingencies, but the latter are mismatched. My finding was that the opposite was true. The L2 Quechua-Spanish children tested performed equally well on ditransitive locatives and transitive possessors when the clitic was reflexive, but their performance was significantly better on transitive possessors than on ditransitive locatives when the clitic was oblique.

I suggested that these data provide evidence against straightforward functional feature transfer from Quechua to Spanish, although a complex of influences from Quechua may be involved in one possible explanation. It might be that L2 Quechua-Spanish speaking children have been unable to interpret *le* in the oblique locative context for the same reason that I have proposed might explain their preference for a reflexive interpretation of oblique clitics overall: the frequency of OV sentences in their L2 input may have impeded them from determining that the oblique clitic is not a base-generated NP object. Furthermore, they may have performed well on possessive sentences because they have analyzed *le* as a genitive rather than dative pronominal element in the transitive context. These proposals are not entirely supported by my analysis of Quechua possessive constructions in which a genitive object appears to have raised into VP and triggered object agreement there.

The straightforward alternative proposal I have made is that the salience of a target structure which is unlike its L1correlate may have forced earlier acquisition of the functional features relevant to possessor clitic constructions in L2 Spanish.

The most compelling single fact that emerges from this investigation is that L2 Quechua-Spanish speaking children interpret reflexive and oblique clitics in ways that illustrate their sensitivity to the deep regularities of Universal Grammar. Transfer of the superficial properties of L1, or of the abstract features of L1, cannot uniformly account for the complex similarities and differences between the monolingual and second language acquirers who participated in the study.

Two residual questions remain:

First, my experimental results indicate that there was a slight depression in the oldest monolingual Bolivian Spanish children's scores on picture selection for reflexive clitics. An examination of the associated production data indicated that the errors stemmed not from an inability to compute the reference of reflexives, but rather from a tendency to interpret one of the pictures differently than intended, and also to extend the interpretation of *se* to non-reflexive impersonal constructions. If a larger number of tokens were used, some of these effects might be reduced.

Second, my results indicate that the L2 Quechua-Spanish children in the youngest agegroup showed a remarkable (although not statistically significant) reversal in the expected ability to interpret oblique clitics as opposed to their scores on reflexive clitics. Their scores were higher on obliques than on reflexives. They differed not only from monolingual acquirers of Spanish, English and Dutch, but also from older L2 Quechua-Spanish speakers in their own school communities.

The group was again small (n=5) and I investigated whether or not the effect was concentrated among children from one particular school, but it was not. I looked at the production data associated with these children's scores to see if they had been advantaged in selecting obliques because they had ruled out the reflexive picture as one in which the actor could be perceived as crying rather than washing her own face. This was not the case among the 6 year olds. Further investigation of these children's production data is warranted to assess whether their different performance on the test at agegroup 6 in contrast to the older agegroups actually results from a change in the specification of their L2 grammar, or from some other factor.

9.1 Final Remarks

Empirical research on second language acquisition is a controversial enterprise, as an examination of the literature indicates. Adequate theory formulation and interpretation of results is often a painstaking process. There is another kind of controversy which is mentioned by Pieter Muysken (1977) and Lefebvre and Muysken (1988) in the prefaces to each work. The controversy is related to the merits of non-native speakers carrying out linguistic research on indigenous and other 'minority' languages. It could be claimed that non-native speakers are prone to bias in their analyses by the theories of language they espouse, a bias which cannot be easily checked against their own intuitions about the language under investigation.

In my case, this bias is twofold, for I am not a native speaker of Spanish, nor am I fluent in Quechua. For this reason, I have made every attempt to cross-check my claims against published analyses of the languages and constructions in question, and to elicit multiple grammaticality judgments from native speakers wherever possible. The insights gained here stand to improve when works of this kind are carried out by native speakers, which will only happen if language preservation and education efforts go hand in hand, as is practiced and envisioned by organizations such as the *Programa de Formación en Educación Intercultural Bilingüe para los Paises Andinos* (ProeibAndes.)

A second type of concern could be raised regarding the immediate social needs of the children who served as the subjects of this experiment. In Muysken's preface to his own thesis, he spoke for others when he said:

> it may be hard to see any immediate relevance that material on languages such as Quechua, including the present thesis, may have for the inhabitants of the . . . highlands. (1977:3)

Muysken provides two arguments against such a view which I believe are worth repeating here. First, those who criticize basic research on Quechua should in fact be concerned about the relevance of any linguistic research, including that on English or Spanish. There is no reason why the properties of Quechua should not be taken into account any time there is a theory about how language 'universally' operates at the syntactic level.

Second, Muysken argues that detailed linguistic analysis of a language in fact may make a contribution toward national efforts in favor of promoting the indigenous languages. This is a complex and delicate process, as I was well aware during my data collection phases in Bolivia. It seems easier for members of an industrial society to have a destructive impact than a constructive impact in a rural community unaccustomed to the ways of outsiders.

Nevertheless, I chose to take the optimistic view that it is worthwhile to cross boundaries. I am hopeful that my study has shown that it is indeed possible and desirable to conduct controlled linguistic research in rural Bolivia, of the kind necessary to promote understanding of the structure of Quechua and Spanish, as well as enhancing our understanding of the nature of second language acquisition. As one of my subjects said when I thanked him for assisting me with the experiment:

"Ha sido un placer" (It's been a pleasure!)

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Appendix A: Spanish Stimulus Sentences

Reflexive ditransitive (type 1, token 1):
Ana se pone el bulto

Reflexive ditransitive (type 1, token 2):
José se pone el sombrero

Reflexive transitive (type 4, token 1):
José se toca el codo

Reflexive transitive (type 4, token 2):
Ana se lava las manos

Oblique ditransitive (type 2, token 1):
José le echa la mixtura

Oblique ditransitive (type 2, token 2):
Ana le pone la sandalia

Oblique transitive (type 5, token 1):
José le toca la cabeza

Oblique transitive (type 5, token 2):
Ana le lava la cara

No clitic ditransitive (type 3, token 1):
Ana echa la crema al vaso

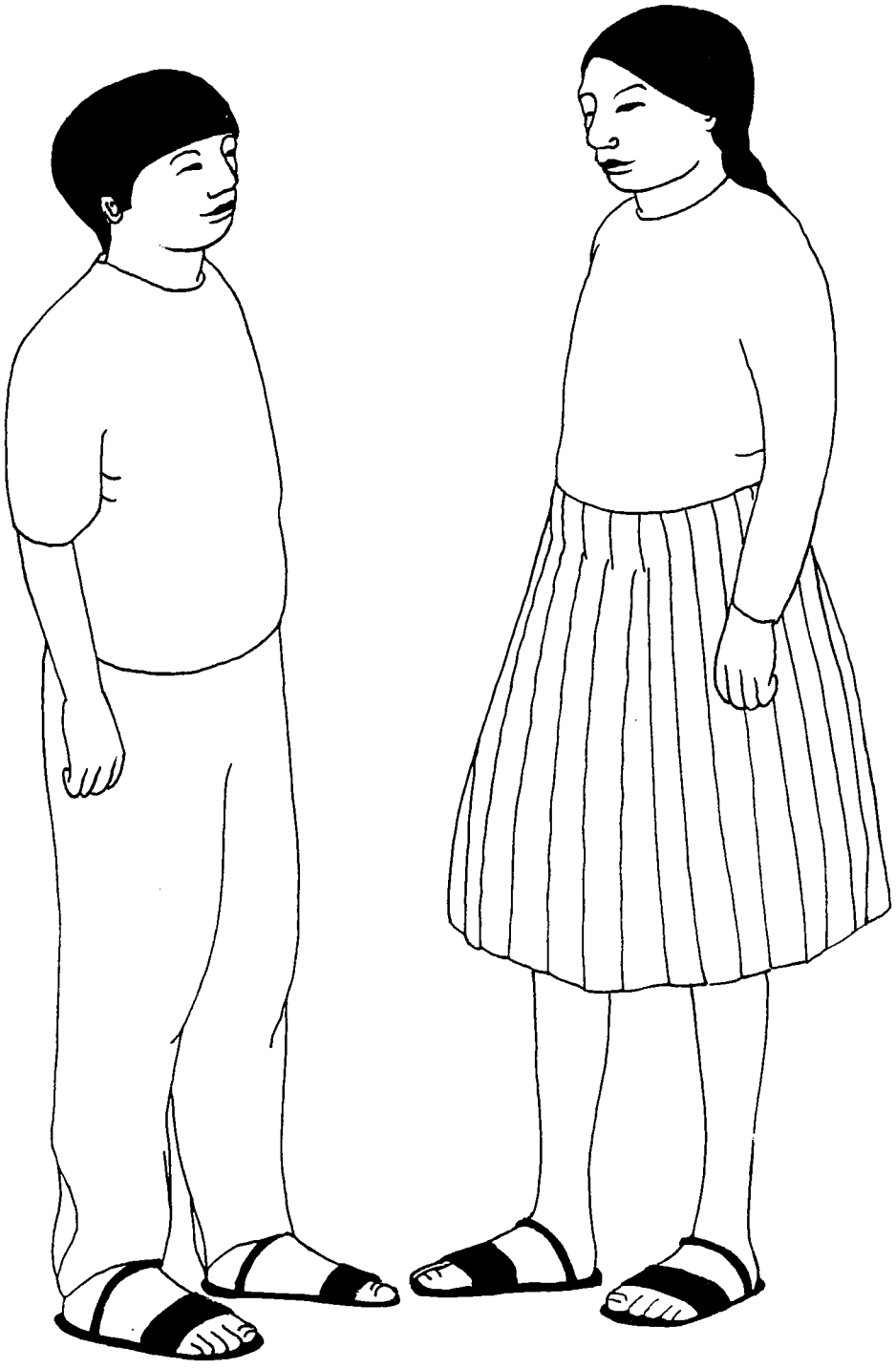
No clitic ditransitive (type 3, token 2):
José pone la chompa en la cama

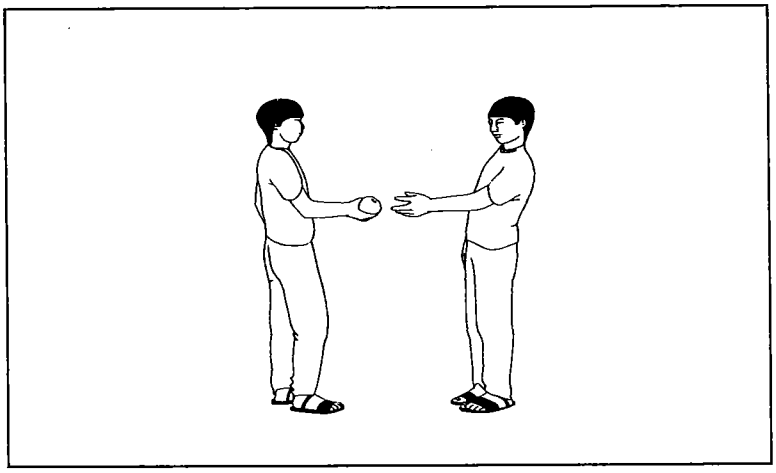
No clitic transitive (type 6, token 1):
Ana toca el telar

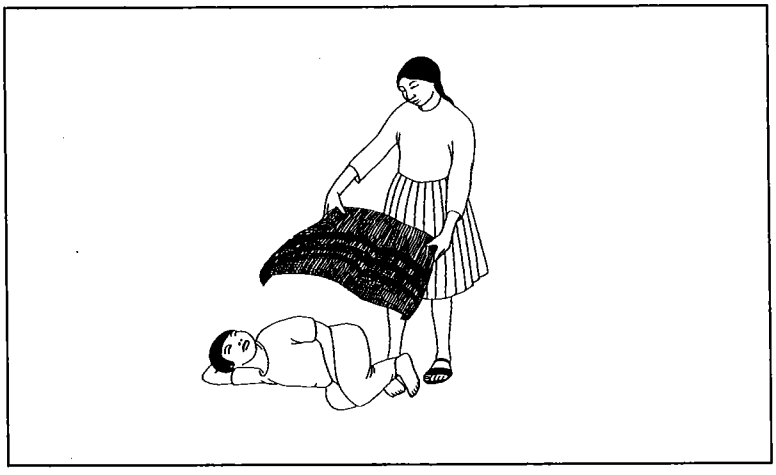
No clitic transitive (type 6, token 2):
José lava los platos

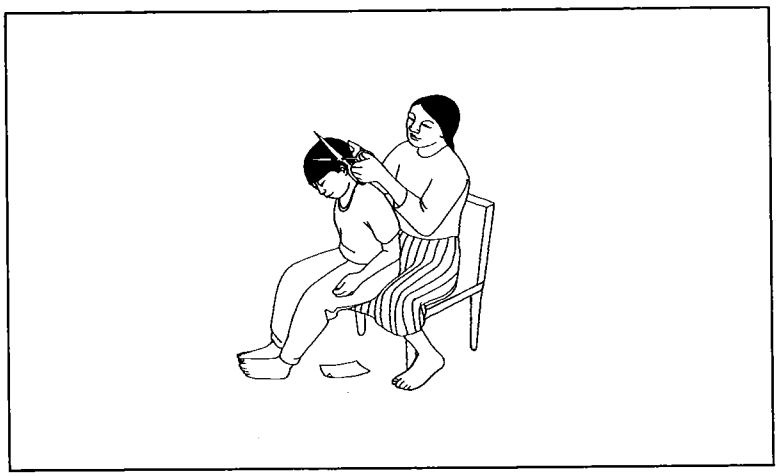
Appendix B: Picture Stimulus Set

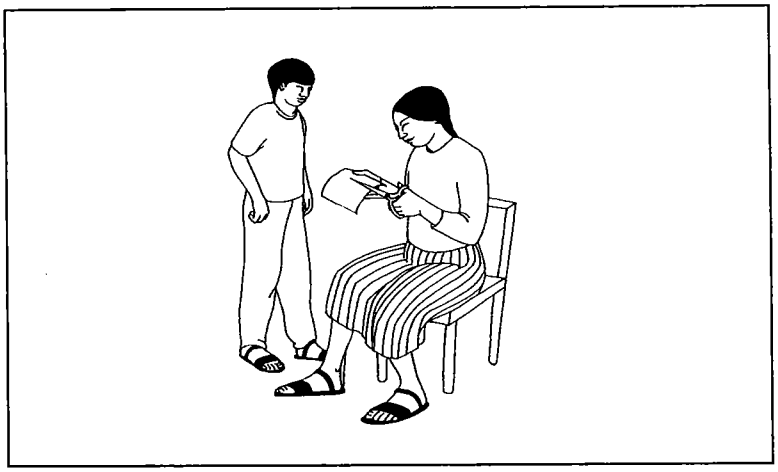
Drawings by Abigail Norman (reduced in size to fit)

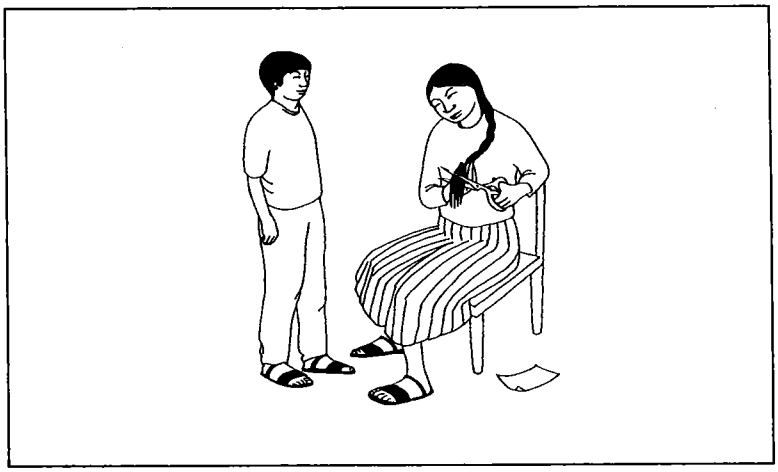


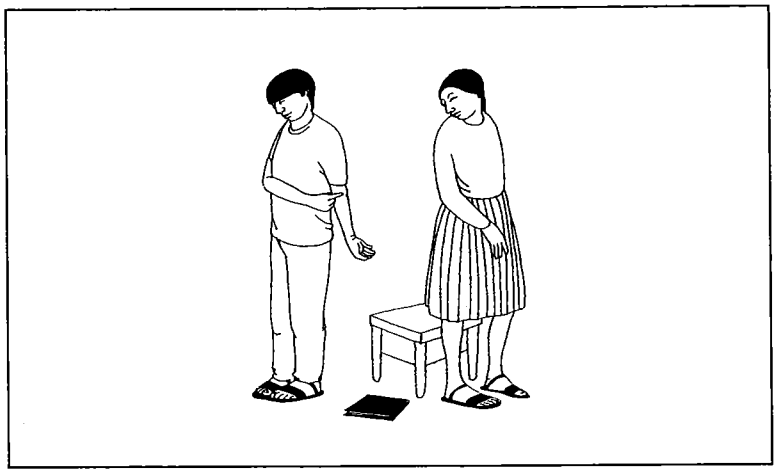


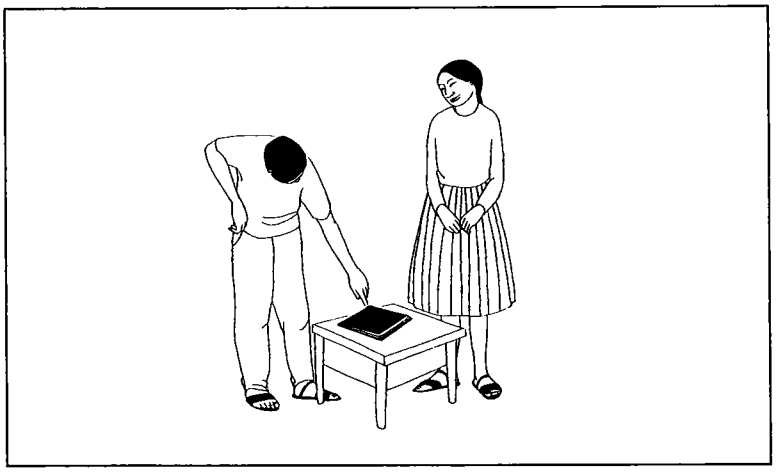


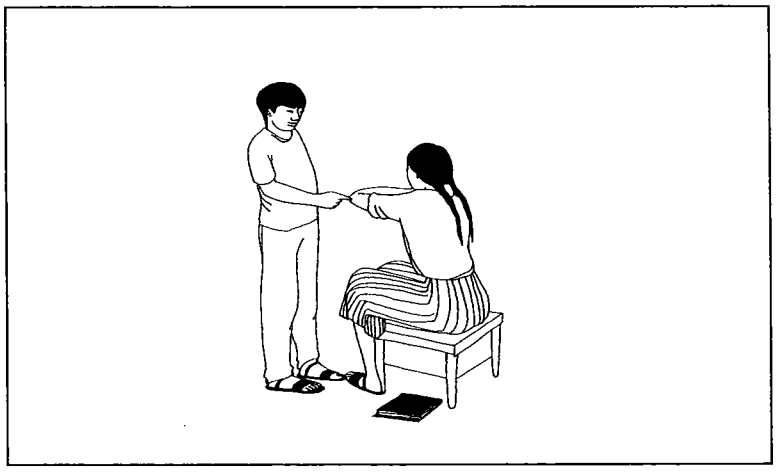


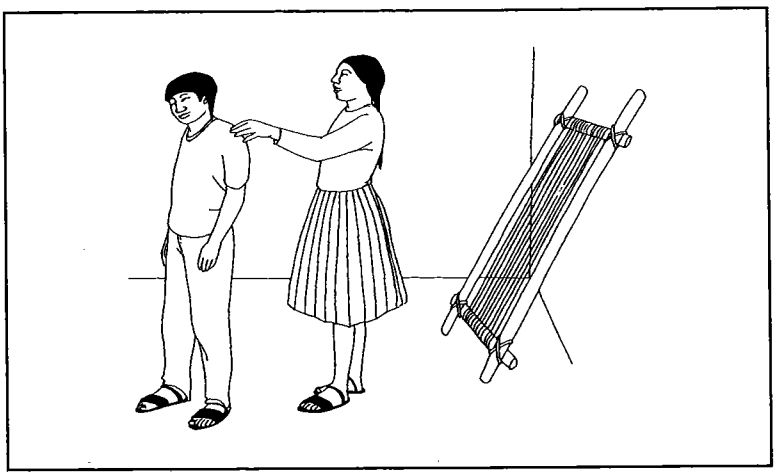


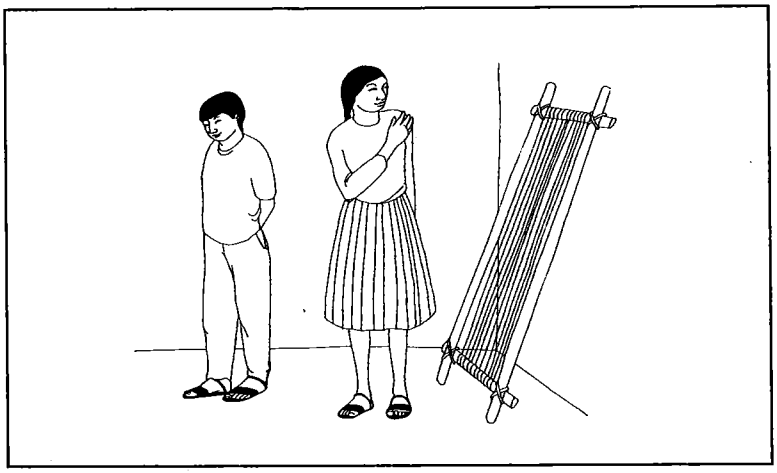


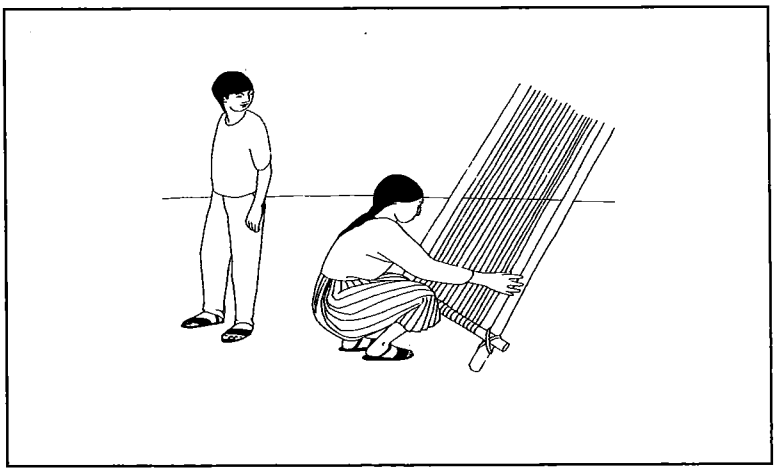


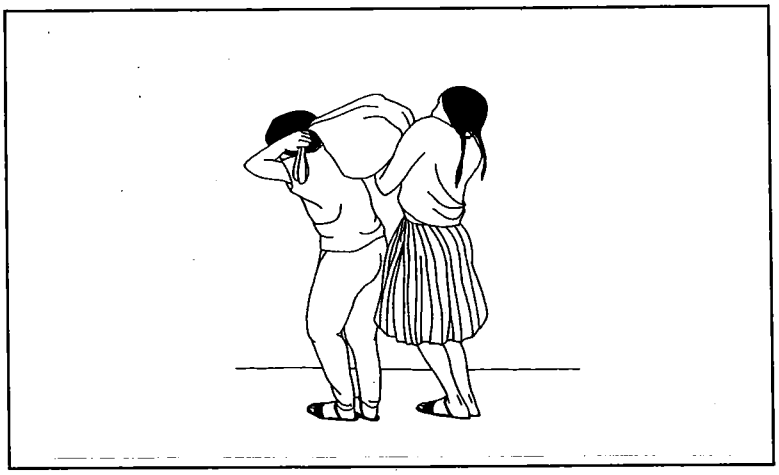


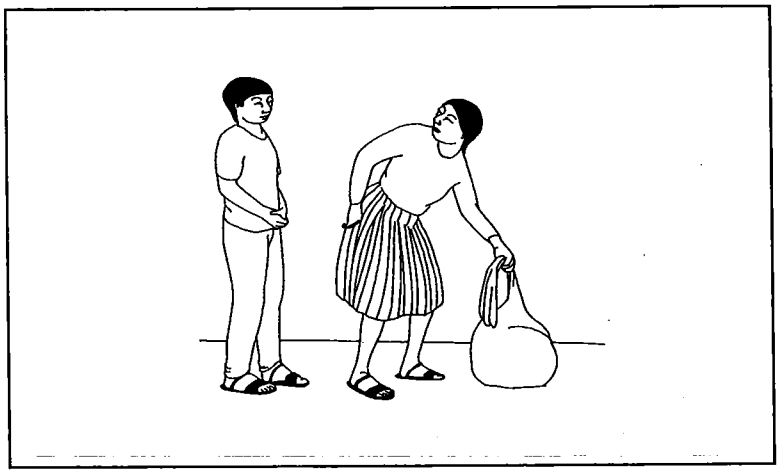


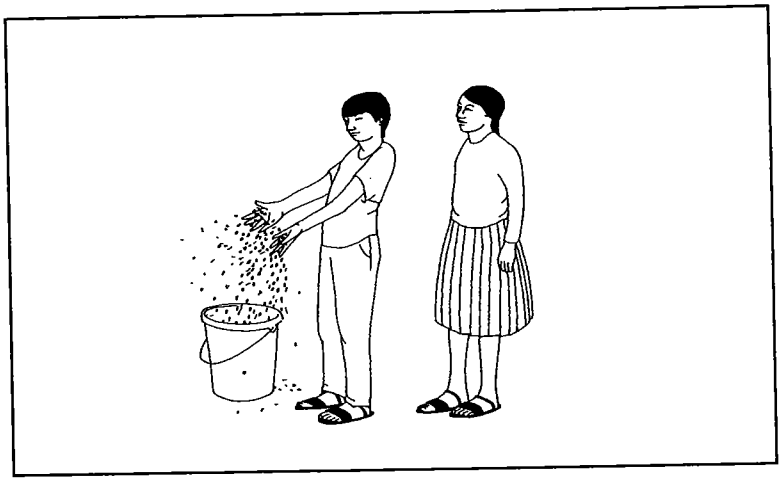


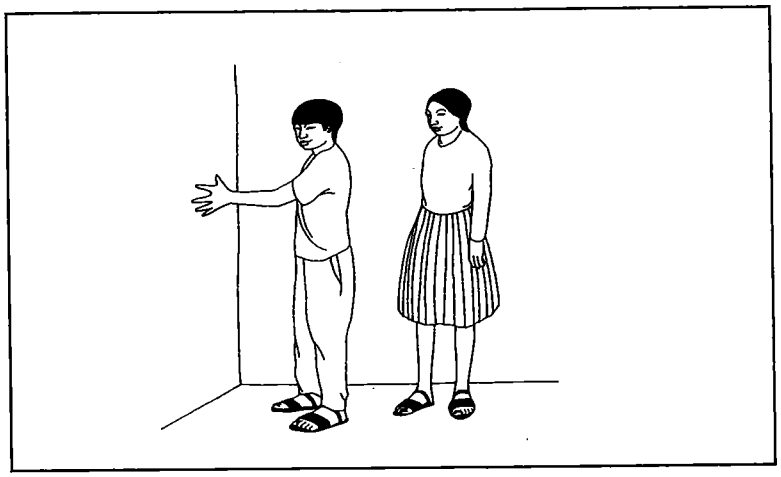


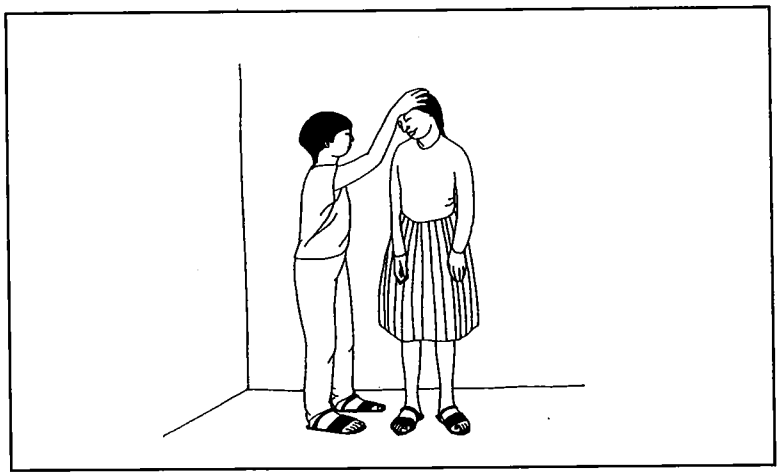


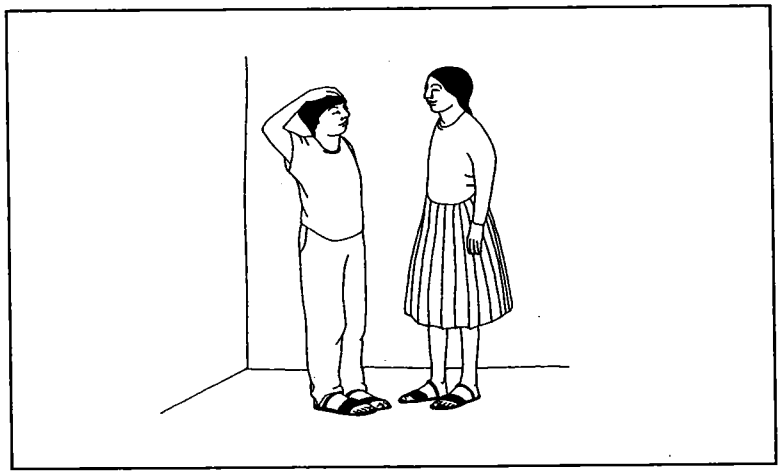


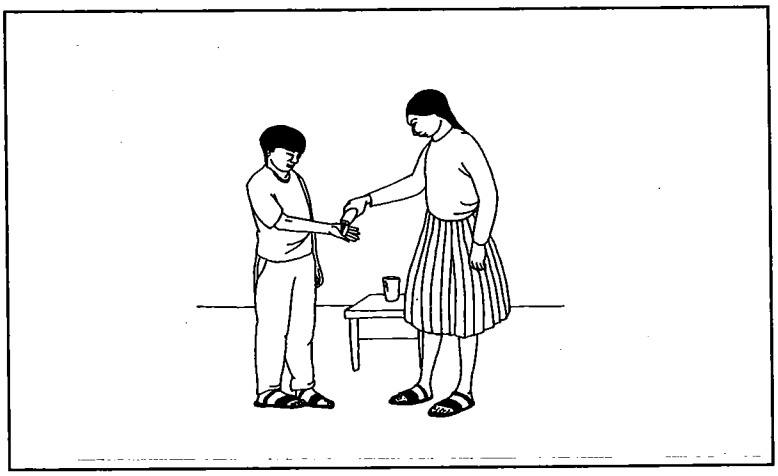


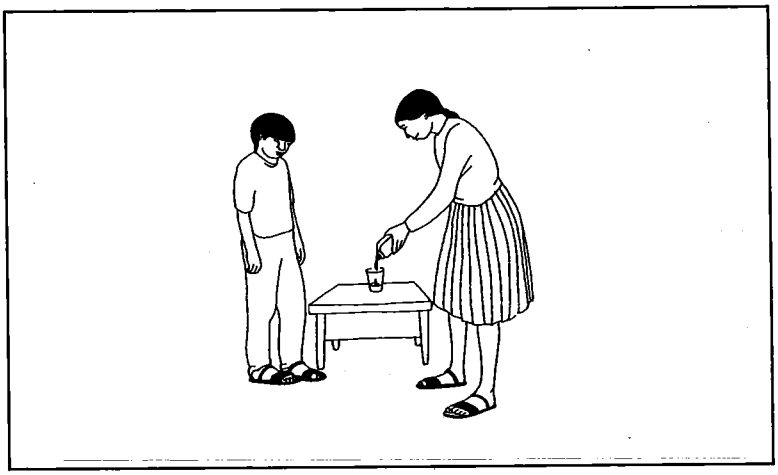


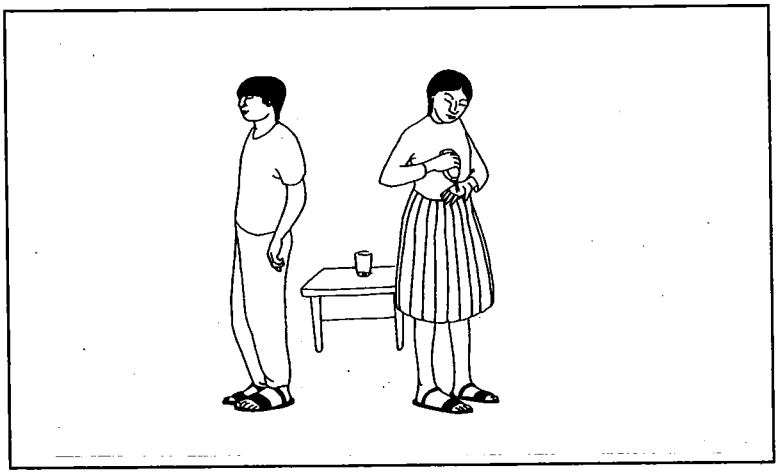


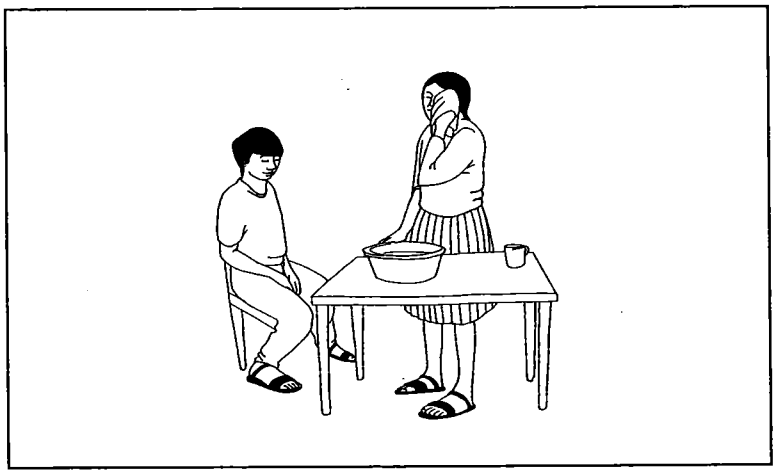


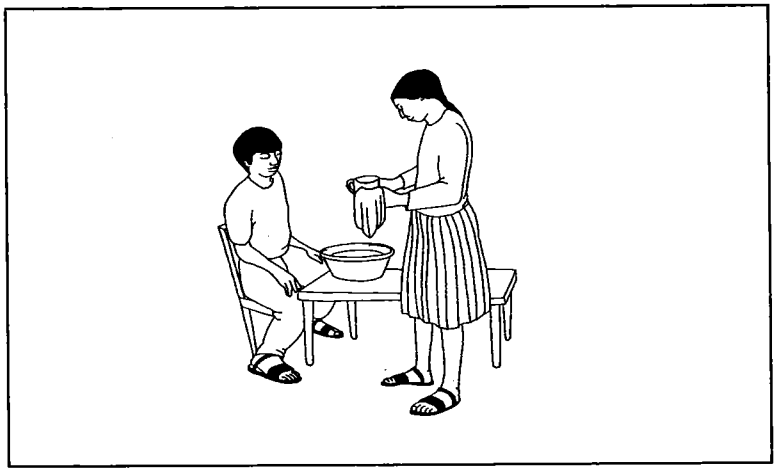


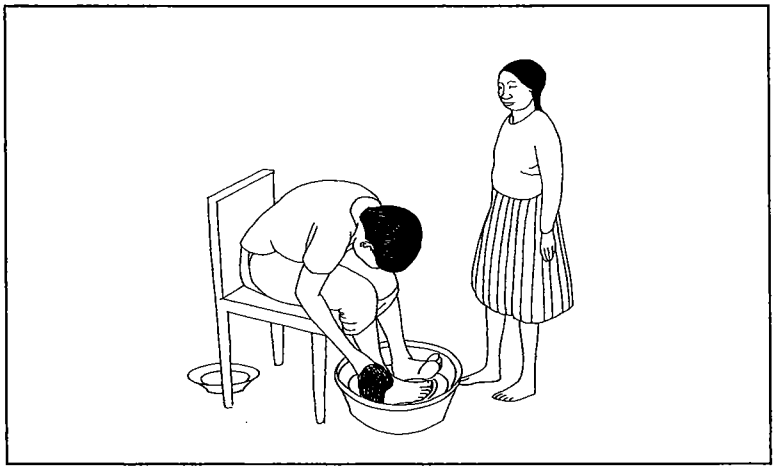


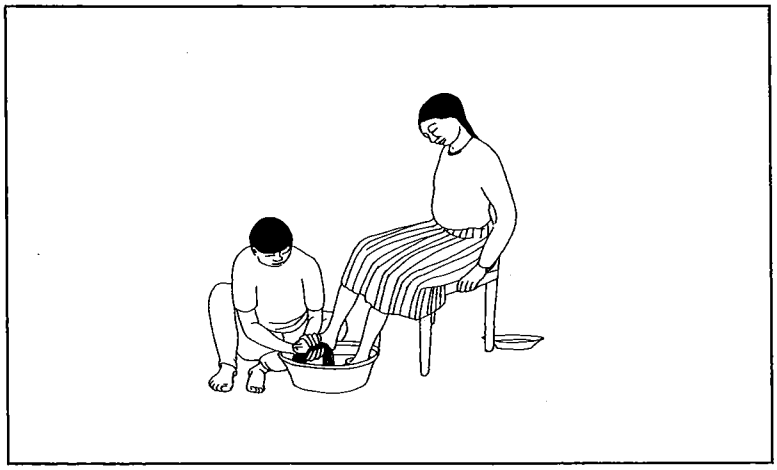


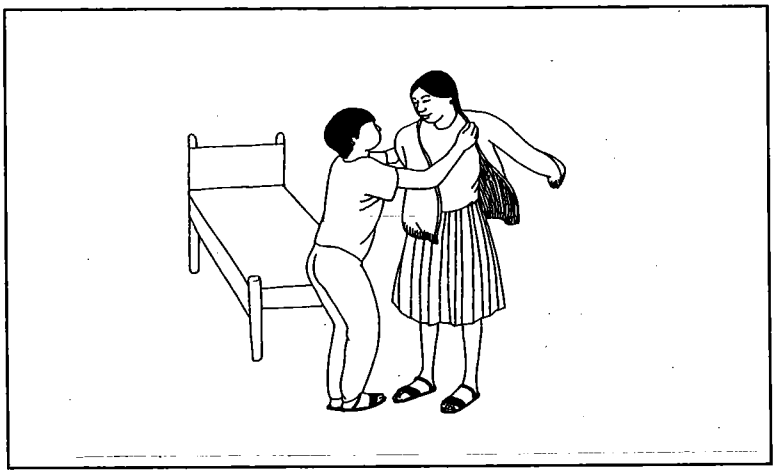


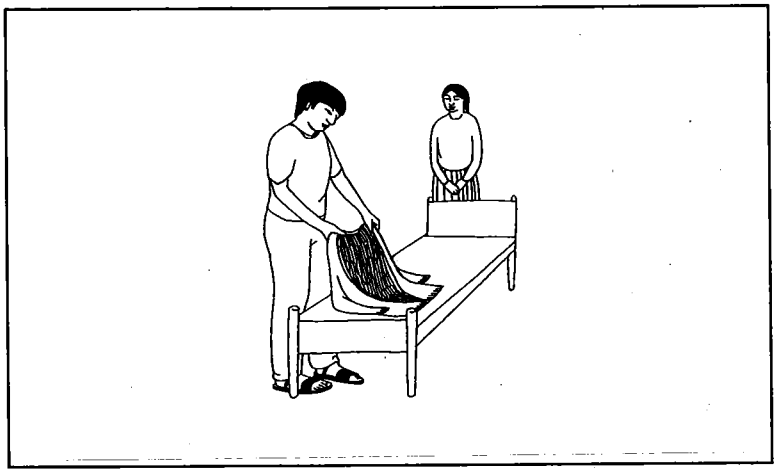


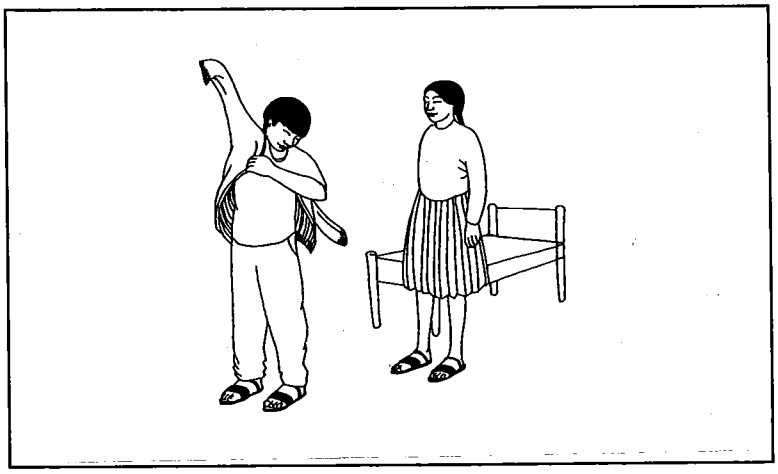


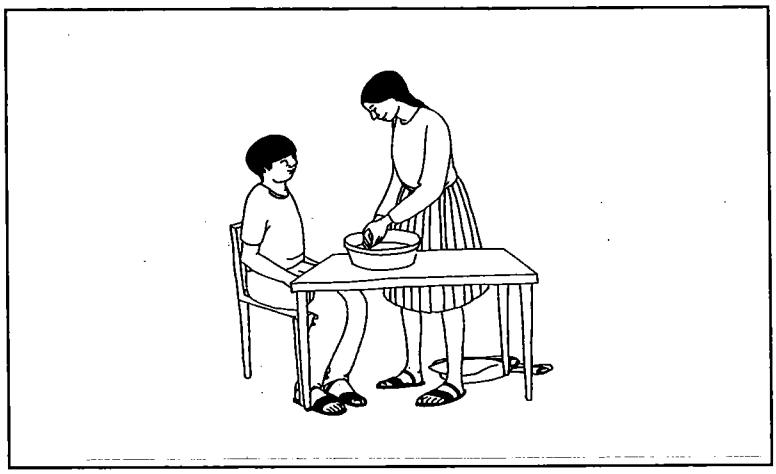


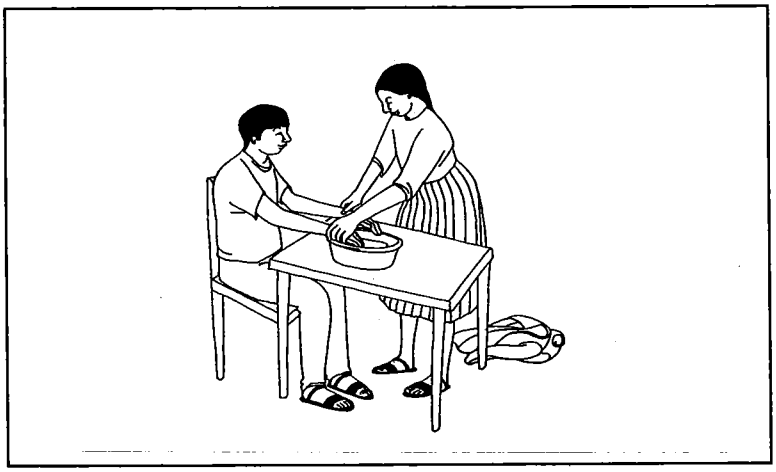


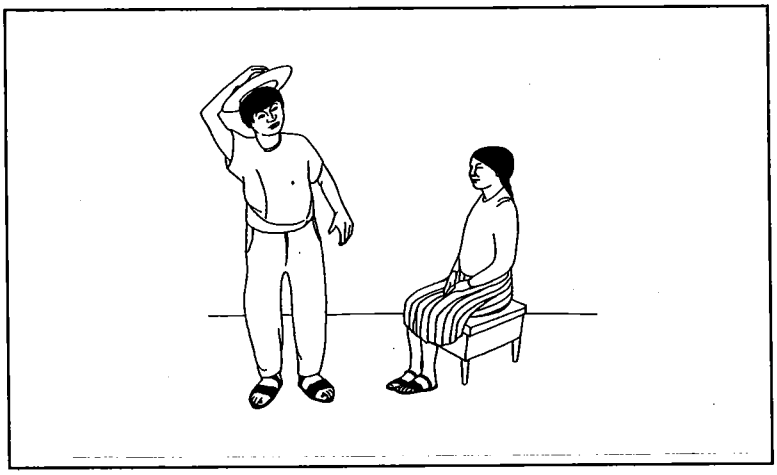


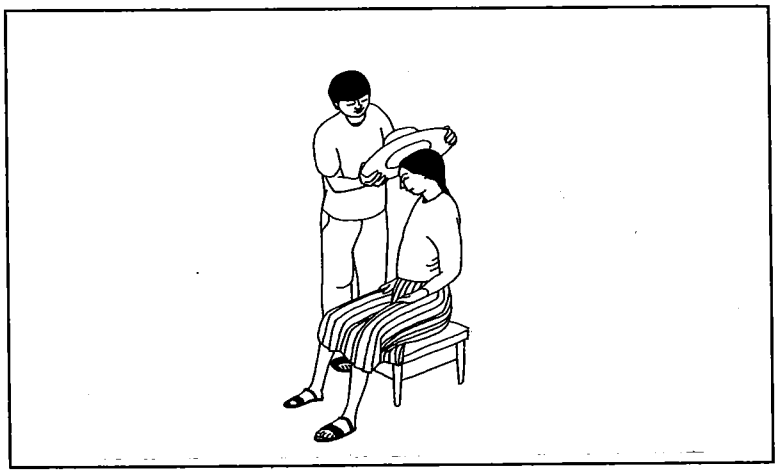


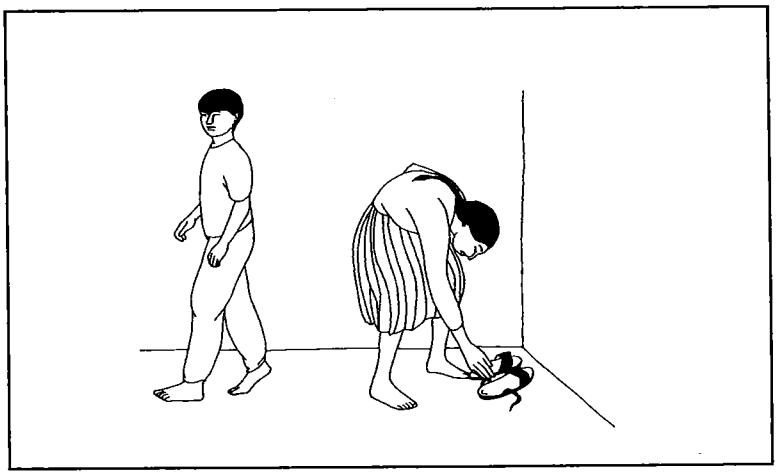


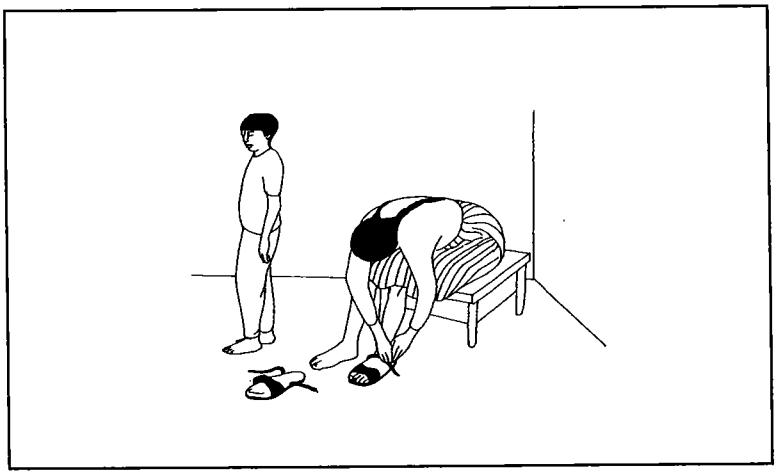


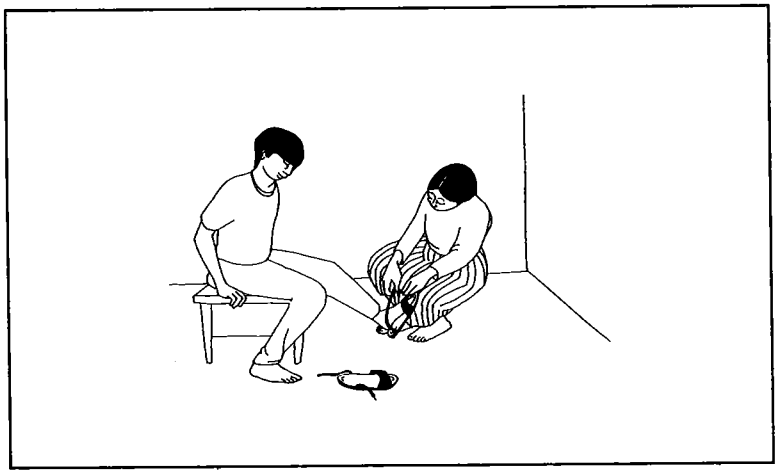


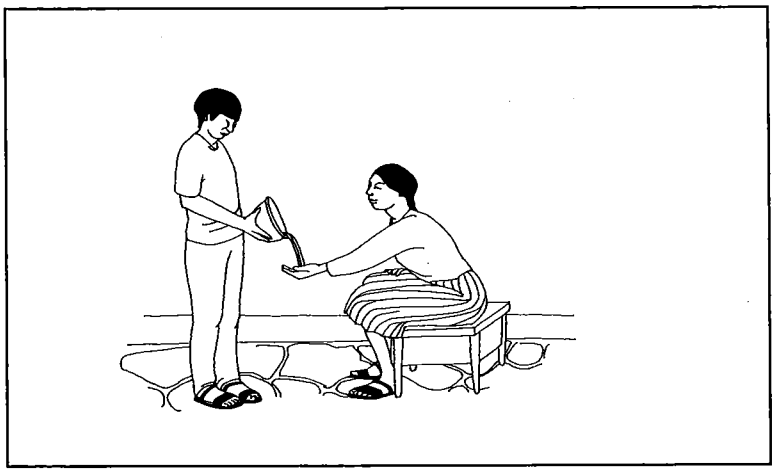


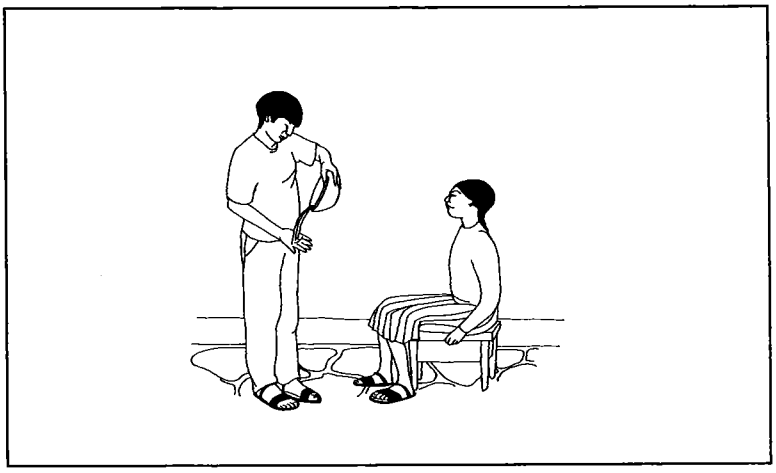


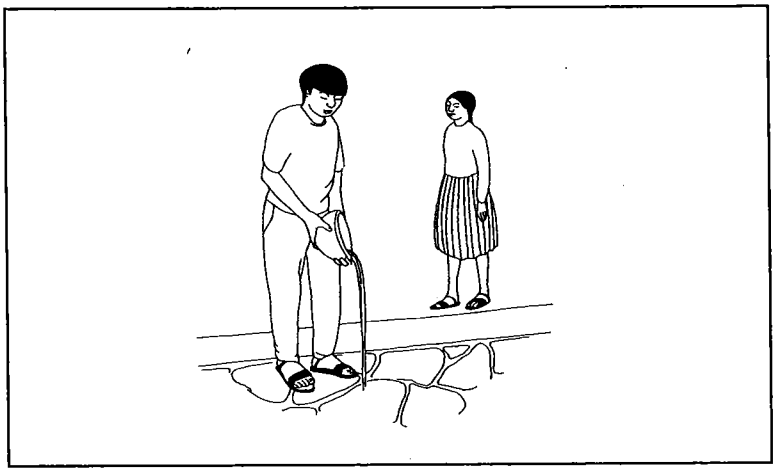












Appendix C: Picture Selection Coding Sheets

Hoja de Datos: Selección de Dibujos, Orden **A**

Nombre _____ Maestra/o _____

Edad _____ Curso _____ Sexo _____

¿Hay alguien en tu casa que te habla en Castellano? _____

a)	José tiene una manzana	a	b	c	Fecha _____
b)	Ana le corta el pelo	a	b	c	Cassette ____
1)	José se toca el codo	a	b	c	Escuela _____
2)	Ana toca el telar	a	b	c	Entrevistador _____
3)	Ana se pone el bulto	a	b	c	
4)	José le echa la mixtura	a	b	c	
5)	José le toca la cabeza	a	b	c	
6)	Ana echa la crema al vaso	a	b	c	
7)	Ana le lava la cara	a	b	c	
8)	José lava los platos	a	b	c	
9)	José pone la chompa en la cama	a	b	c	
10)	Ana se lava las manos	a	b	c	
11)	José se pone el sombrero	a	b	c	
12)	Ana le pone la sandalia	a	b	c	
13)	José se echa el agua	a	b	c	

Hoja de Datos: Selección de Dibujos, Orden **B**

Nombre _____ Maestra/o _____

Edad _____ Curso _____ Sexo _____

¿Hay alguien en tu casa que te habla en Castellano? _____

a)	José tiene una manzana	a	b	c	Fecha _____
b)	Ana le corta el pelo	a	b	c	Cassette ____
1)	Ana le lava la cara	a	b	c	Escuela _____
2)	José lava los platos	a	b	c	Entrevistador _____
3)	José pone la chompa en la cama	a	b	c	
4)	Ana se lava las manos	a	b	c	
5)	José se pone el sombrero	a	b	c	
6)	Ana le pone la sandalia	a	b	c	
7)	José se toca el codo	a	b	c	
8)	Ana toca el telar	a	b	c	
9)	Ana se pone el bulto	a	b	c	
10)	José le echa la mixtura	a	b	c	
11)	José le toca la cabeza	a	b	c	
12)	Ana echa la crema al vaso	a	b	c	
13)	José se echa el agua	a	b	c	

Appendix D: Southern Quechua Translations of Spanish Test Sentences

Here are original translations from Spanish to Quechua of the Picture Selection Audio Stimulus Sentences. The underlined sentences correspond to Spanish sentences actually read aloud during the test; the remaining sentences in each paradigm correspond to the other pictures in each set, plus a final first person sentence which was included to ascertain whether overt object person marking is required on the verb for each thematic context.

Items 1-12 are part of the test proper; items b and 13 are part of the pre- and post-test.

The translations were written by Maria Cristina Parackáhua (MCP) in May, 2000. In some cases, additional alternatives and comments by myself (SK), MCP and Pedro Plaza Martínez (PPM) are discussed in the footnotes. Implications of notes by PPM should be taken to extend to other test sentences of the same type, but I have placed them with the specific items I requested his judgments on.

Pretest item b)

Ana chukchanta rutun	*Ana le corta el pelo*
Ana chukchanta rutukun	*Ana se corta el pelo*
Ana laphita rutun	*Ana corta el papel*
Ana chukchayta rutuwan	*Ana me corta el pelo*

Test item 1)

Jusi makimuqunta jap'in	*José le toca el codo*
Jusi makimuqunta jap'ikun	*José se toca el codo*
Jusi p'amqata jap'in	*José toca el libro*
Jusi makimuquyta jap'iwan	*José me toca el codo*

Test item 2)

Ana likranta jap'in	*Ana le toca el hombro*
Ana likranta jap'ikun	*Ana se toca el hombro*
Ana awanata jap'in	*Ana toca el telar*
Ana likrayta jap'iwan	*Ana me toca el hombro*

Test item 3)

Ana q'ipita q'ipirichin	*Ana le pone el bulto*
Ana q'ipita q'ipirikun	*Ana se pone el bulto*
Ana q'ipinta pampaman churan[28]	*Ana pone el bulto en el suelo*
Ana q'ipita q'ipirichiwan	*Ana me pone el bulto*

[28] Informant inserted optional possessive marker *-n* on DO= 'Ana pone su bulto en el suelo'

Test item 4)

Jusi misturawan chakchun[29],[30]	*José le echa la mixtura*
Jusi misturawan chakchukun	*José se echa la mixtura*
Jusi misturata waltiman chakchun	*José echa la mixtura en el balde*
Jusi misturawan chakchuwan[31]	*José me echa la mixtura*

Test item 5)

Jusi umanta jap'in	*José le toca la cabeza*
Jusi umanta jap'ikun	*José se toca la cabeza*
Jusi pirqamanta jap'ikun[32]	*José toca la pared*
Jusi umayta jap'iwan	*José me toca la cabeza*

Test item 6)

Ana cremawan jawin[33]	*Ana le echa la crema*
Ana cremawan jawikun	*Ana se echa la crema*
Ana wasuta cremawan jawin[34]	*Ana echa la crema al vaso*
Ana cremawan jawiwan	*Ana me echa la crema*

---

[29] Informants preferred non-count DO 'confetti' to be marked with instrumental *-wan*

[30] SK to PPM: **Jusi misturata (Anaman) chakchun**
PPM: Es posible **José misturata (Anaman) chakchun.**
Pero mejor sería **José misturata (Anaman) chakchuykun,** donde -yku indica movimiento hacia abajo o adentro.
SK to PPM: **Jusi misturata (Anaman) chakchumun**
PPM: Es perfectamente posible; significa que lo hace alejándose o acercándose al hablante.

[31] SK to PPM: **Jusi misturata chakchumuwan**
Se puede traducir de dos maneras: 'José me echa la mixtura' (movimiento hacia el hablante) o 'me va a echar la mixtura (en otro lado)' (movimiento alejándose al hablante.)
Para expresar 'me echa la mixtura' la forma más común sería:
Misturawan chakchuykuwan
La diferencia mayor tiene que ver con el uso del sufijo -wan en lugar de -ta propuesto en las oraciones originales, y en el uso de -yku; véase nota 3.

[32] I am unsure of why the DO appears to have ablative case and the verb has either reflexive or modal *-ku.*
The transliteration back to Spanish would be 'José se toca de la pared'

[33] See note 2 above

[34] SK to MCP: **Ana wasuta cremawan jawin :** 'unta o pinta el vaso con crema'
Ana wasupi cremawan jawin: 'Ana está en el vaso'
Ana wasupi cremata jawin: igualmente, 'Ana está dentro del vaso'
*** Ana wasuta cremata jawin:** está mal porque estás mezclando el vaso con la crema

Test item 7)

Ana uyanta makch'in	*Ana le lava la cara*
Ana uyanta masch'ikun	*Ana se lava la cara*
Ana wasuta mayllan[35]	*Ana lava la taza*
Ana uyanta masch'iwan	*Ana me lava la cara*

Test item 8)

Jusi chakisninta mayllan	*José le lava los pies*
Jusi chakisninta mayllakun	*José se lava los pies*
Jusi latusta mayllan	*José lava los platos*
Jusi chakisniyta mayllan[36]	*José me lava los pies*

Test item 9)

Jusi chumpata churan	*José le pone la chompa*
Jusi chumpata churakun	*José se pone la chompa*
Jusi chumpata puñunapataman churan[37]	*José pone la chompa en la cama*
Jusi chumpata churawan	*José me pone la chompa*

Test item 10)

Ana makinta mayllan[38]	*Ana le lava las manos*
Ana makinta mayllakun	*Ana se lava las manos*
Ana p'achata t'aqsas[39]	*Ana lava las blusas*
Ana makiyta mayllawan[40]	*Ana me lava las manos*

[35] The verb makch'in/sch'in seems to be only for facewashing

[36] Lack of object person marker on verb shows verbal possessor agreement is optional; but nominal possessor agreement is obligatory.

[37] From Parker's (1969) glossary: puñuna=sleep, pata=surface; perhaps puñunapata is compound noun.
SK to MCP: **Jusi chumpata puñunapatapi churan**
MCP: tambien es posible

[38] SK to PPM: Ana makinta mayllapun
PPM: Sí, literalmente 'Ana se lo lava las manos' o 'le lava las manos'
SK to PPM: Ana makinta mayllamun
PPM: 'Ana va a lavarle la/las mano/s'

[39] t'aqsas may mean launder; not sure why not inflected for 3SUBJ.

Test item 11)

Jusi luq'uta churan	*José le pone el sombrero*
Jusi luq'uta churakun	*José se pone el sombrero*
Jusi luq'uta tiyanaman churan	*José pone el sombrero en la silla*
Jusi luq'uta churawan	*José me pone el sombrero*

Test item 12)

Ana ujut'ata (Juseman) churan[41]	*Ana le pone la sandalia*
Ana ujut'ata churakun	*Ana se pone la sandalia*
Ana ujut'ata k'uchuman churan	*Ana pone la sandalia en el rincón*
Ana ujut'ata churawan[42]	*Ana me pone la sandalia*

Post-test item 13)

Jusi yakuwan jich'an[43]	*José le echa el agua*
Jusi yakuwan jich'akun	*José se echa el agua*
Jusi yakuta pampaman jich'an	*José echa el agua en el patio*
Jusi yakuwan jich'awan	*José me echa el agua*

---

[40] SK to PPM: **Ana makiyta mayllamuwan**
PPM: Esta oración es perfectamente posible. 'Ana me lava la mano/las manos', hace un movimiento hacia donde estoy.
SK to PPM: **Ana makiyta mayllapuwan**
PPM: Se traduce 'Ana me lo lava mi mano'. Esta oración parece algo rara, da la impresión de que la mano es un objeto desarticulable. Si fuera wasi no habría problema: **Ana wasiyta pichapuwan** = 'Ana me lo barre mi casa = Ana me barre la casa'

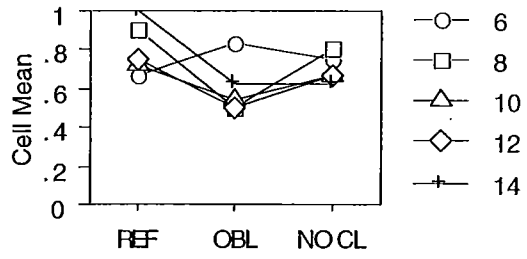
[41] PPM: La oración 12a) es comprensible, puede significar también 'Ana pone la sandalia sobre (la mesa)', o sea chura no implica necesariamente un objeto persona.
SK to PPM: Ana ujut'ata (Jusiman) churamun
PPM: Las pone a José.

[42] SK to PPM: **Ana ujut'ata churaykamuwan**
PPM: se puede traducir Ana me pone la sandalia; ku+wa determina que el objeto directo es la persona que habla; ku>ka delante mu

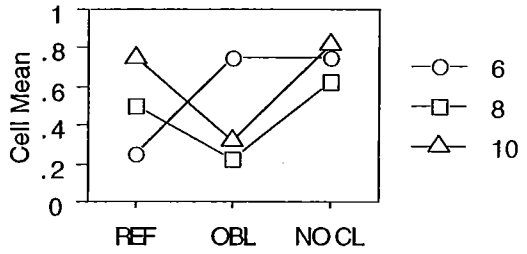
[43] See note 2.

Appendix E: Quechua-Spanish Scores Correct by *School, Clitic Type* and *Agegroup*

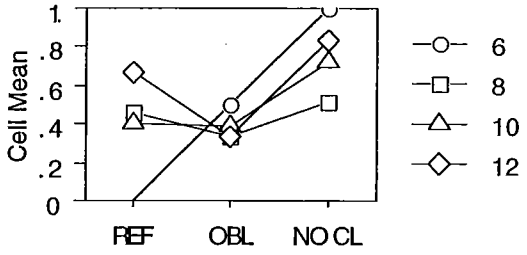
Escuela Hornok'asa



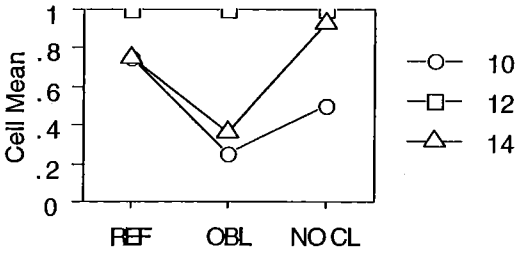
Escuela Quirahuani



Escuela Pisily



Escuela San Juan



Appendix F: L2 Quechua-Spanish Descriptive Statistics on *Clitic Type* by *Agegroup*

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Overall Score REF, Total	.599	.491	.027	332	0.000	1.000	4
Overall Score REF, 6	.450	.510	.114	20	0.000	1.000	0
Overall Score REF, 8	.558	.499	.049	104	0.000	1.000	0
Overall Score REF, 10	.581	.495	.041	148	0.000	1.000	4
Overall Score REF, 12	.750	.441	.083	28	0.000	1.000	0
Overall Score REF, 14	.781	.420	.074	32	0.000	1.000	0
Overall Score OBL , Total	.419	.494	.027	332	0.000	1.000	4
Overall Score OBL , 6	.750	.444	.099	20	0.000	1.000	0
Overall Score OBL , 8	.327	.471	.046	104	0.000	1.000	0
Overall Score OBL , 10	.419	.495	.041	148	0.000	1.000	4
Overall Score OBL , 12	.500	.509	.096	28	0.000	1.000	0
Overall Score OBL , 14	.438	.504	.089	32	0.000	1.000	0
Overall Score NO CL , Total	.714	.453	.025	332	0.000	1.000	4
Overall Score NO CL , 6	.800	.410	.092	20	0.000	1.000	0
Overall Score NO CL , 8	.606	.491	.048	104	0.000	1.000	0
Overall Score NO CL , 10	.716	.452	.037	148	0.000	1.000	4
Overall Score NO CL , 12	.786	.418	.079	28	0.000	1.000	0
Overall Score NO CL , 14	.938	.246	.043	32	0.000	1.000	0

Appendix G: L2 Quechua-Spanish Correct Scores by *Token*