6. Quechua

In this chapter I compare several members of the largest indigenous language family (in speaker numbers) in the Americas, Quechua. Quechua is generally considered to be an isolate, although according to Greenberg (1987: 99) it is part of the Andean branch of Amerindian.

Quechua is believed to have originated in Peru, where it has been spoken since at least the fifth century (cf. Cerrón-Palomino 1987). It later split into two distinct varieties, called Quechua I and Quechua II. The Quechua I variety split into several varieties, which I will not discuss here.[148] Quechua IIa split off from Quechua II around 800, when a group of Quechua speakers moved northwards. Cajamarca Quechua, which is relevant to my argument (cf. section 6.3.3.2), is considered to be a Quechua IIa variety. Another split occurred prior to 1500, when traders moved from the Quechua heartland northwards along the coast. These merchants introduced Quechua IIb, as a lingua franca, into northern Peru, Ecuador and parts of Columbia, before these lands became part of the Inca Empire (Torero 1984).[149]

Meanwhile, groups of speakers of Quechua II migrated south-eastward towards Ayacucho and Cuzco. Their varieties became known as Quechua IIc varieties. The fifteenth century saw the rise of the Inca empire, which used a Quechua II variety as its language of administration. Quechua also reached Bolivia and Argentina for the first time in the fifteenth century. After the fall of the Inca Empire Quechua began to consolidate its position in the Andes where it was used as a lingua franca and as the language of evangelisation.

I have chosen varieties of Bolivian, Argentinean, and Ecuadorian Quechua, to compare with older Peruvian varieties, i.e. Ayacucho, Cuzco and Cajamarca Quechua. To be precise, I examine the varieties of Quechua spoken in Cochabamba in Bolivia, Santiago del Estero in Argentina, and Imbabura in Ecuador. Bolivian Quechua was derived from Cuzco Quechua, while Argentinean Quechua has probably been influenced by other Peruvian Quechua varieties, like Ayacucho and Cajamarca Quechua. The differences between these Peruvian Quechua varieties have been taken into account when examining Argentinean Quechua. Ecuadorian Quechua broke away from Quechua II at an earlier time. After the Inca expansion Quechua II as spoken by the Incas became the superstrate variety in Ecuador (Muysken 1977).

In Figure 6.1 I show a tree diagram of the Quechua varieties. This figure is based on Torero (1974), with some additional details in the Quechua IIc sub-branch, based on Adelaar (1994). The relevant varieties are indicated in bold print. Straight lines indicate direct genetic relationships, while dotted lines indicate adstrate influence. Both these labels are of course abstractions from the complex Quechua history which I describe in more detail below.

In the next section, it will become clear that Ecuadorian Quechua developed in a speech community closest to Type 2. Argentinean Quechua emerged in a community with Type

[148] One of the main differences between Quechua I and Quechua II lies in the expression of number. In Quechua II there is a separate affix which is placed after the person markers, while in Quechua I number is expressed by optional derivational affixes behind the verb stem.

[149] Inca is sometimes written as 'Inka'. I consistently spell 'Inca'.

2 characteristics as well, while the Bolivian Quechua community is closer to a Type 1 community. The speech community of Cuzco Quechua is the most typical Type 1 community of these four.

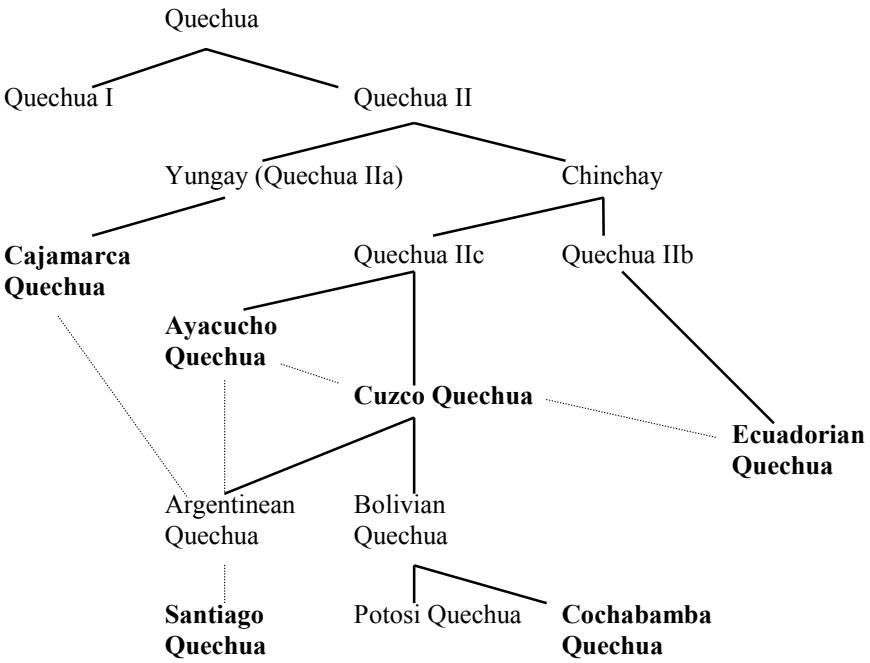

Figure 6.1 Tree diagram of Quechua varieties

In Table 6.1 I give an overview of the geographical regions and the historical periods in which the various Quechua varieties developed.

Table 6.1 Geographical and temporal location of several Quechua varieties

	Early History	Inca Period	Spanish Period
Central Peru	Quechua I	Quechua I	Quechua I
Northern Peru	Quechua IIa	Quechua IIa	Quechua IIa
Southern Peru	Quechua II	Quechua II, Cuzco Quechua, Ayacucho Quechua	(Quechua II) Cuzco Quechua, Ayacucho Quechua
Bolivia	-	Quechua II	Cuzco Quechua/ Bolivian Quechua
Argentina	-	Quechua II?	Cuzco Quechua/ Argentinean Quechua
Ecuador	(Quechua IIb)	Quechua IIb, Quechua II	Ecuadorian Quechua

First of all, in 6.1, I outline the region's social history in more detail. This is followed by a discussion, in 6.2, of the verbal inflection of Cuzco Quechua. The developments in Bolivian and Argentinean Quechua are discussed together, in 6.3, while section 6.4 deals

with the northern Quechua II variety, Ecuadorian Quechua. In the last section I summarise and discuss the changes in Quechua, and give an OT account of these developments.

6.1 Social history of Quechua

To a large extent the Quechua varieties have a rather similar history; the Inca Empire shaped and influenced all four varieties, and later the Spanish Empire stretched out over the lands where these were spoken. Their common history is described first, and in the later sections I focus on the differences between the varieties.

6.1.1 Early history

The Quechua area is located in the western part of South America, encompassing modern day Peru, Ecuador, Bolivia, and some parts of Colombia, Chile and Argentina. This region is characterised by the second highest mountain range in the world, the Andes, which stretches out along the western coast of South America. The Andes borders on a small coastal strip in the west, while in the east the Amazon basin stretches out (cf. Figure 6.2).

We have only a limited knowledge of the history of the Andes before the Spanish Conquest and especially of the pre-Inca history of Quechua speaking areas. Written sources date from the Spanish Conquest, and in these accounts earlier history is often treated in mythological terms (Conrad & Demarest 1984: 86). However, by putting together archaeological, linguistic and ethno-historical evidence we can draw the following picture.

The pre-Inca period knew alternating periods of cultural similarity and fragmentation. After an earlier period of fragmentation, between 500 and 1000 CE two cultural realms dominated the middle Andes, that is, Wari and Tiahuanaco. Wari had Ayacucho as its centre, and its influence spread to Cajamarca in northern Peru. Tiahuanaco surrounded Lake Titicaca (Lumbreras 1999: 520ff.). Basic features of the later Inca Empire, like ancestor worship, social stratification and centralisation of power were continuations of these earlier cultures. It is not certain what languages were spoken in Wari and Tiahuanaco. However, probably Quechua varieties were spoken in some parts of the Wari Empire, because the Quechua territory between 500 and 1400 partly overlaps with the Wari Empire. In Tiahuanaco Pukina was probably an important language.

The origin of Quechua lies in the coastal region of central Peru around the modern city of Lima before 500 CE (cf. Cerrón-Palomino 1987: 327ff; Torero 1974, 1998: 603ff.). At that time, in Cuzco and Ayacucho Aymaran languages were probably still spoken. The long period of Quechua-Aymara coexistence harmonised these languages fundamentally (Torero 1998: 606), especially the southern Quechua varieties, that would later develop into the Quechua IIc varieties.

After the emergence of Quechua, some varieties, called Quechua II, spread slowly eastward and southward along the coast, while Quechua I moved slowly over the highlands (cf. Torero 1984: 370). The centuries-long expansion of Quechua II may be due to its status as the language of the large temple complex at the Peruvian Coast just south of Lima, Pacha Kamaq (Torero 1974: 79; 1984: 371). For more than a millennium this remained an important centre of worship, both under the Wari and the Inca reign.

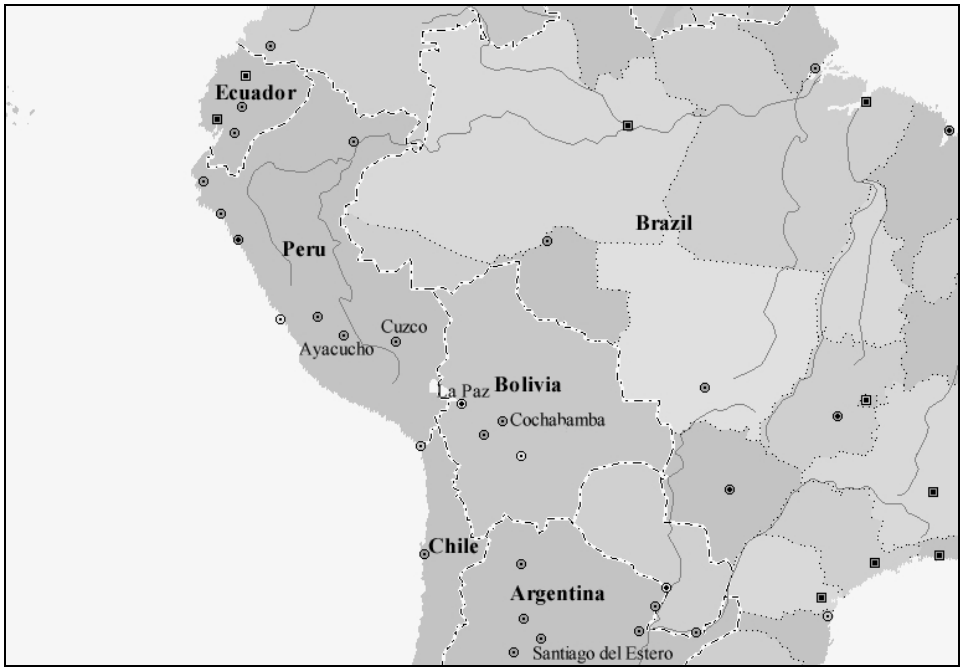

Figure 6.2 Map of the area where Quechua is spoken

The Quechua I varieties did not spread as far from their original location as some Quechua II varieties. Their domain would soon be restricted to the highlands of central Peru. Under Wari domination, some Quechua II speakers moved to northern Peru around 800 CE, where the later Quechua IIa varieties of Cajamarca and Lambayeque arose.

After the fall of the two larger Empires in the first centuries of the second millennium Quechua II kept on expanding slowly further eastward. Again there was a split somewhere before 1500, when Quechua speakers moved northwards along the coast as far as northern Peru, and Ecuador. This variety came known as Quechua IIb. Meanwhile Quechua IIc was spoken to the west of the city of Cuzco, which would soon grow in power as the capital of the Incas.

6.1.2 The Inca Empire

After the fall of Tiahuanaco, there had been no large empire in the southern Peruvian highlands, until the rise of Inca power. The early Inca people lived in the region around Cuzco among several other groups fighting each other. Their society was divided into 'ayllus', groups on the village level that sustained each other economically and shared beliefs about a common ancestor. In the Inca culture militancy and courage were appreciated, and it was believed that divine forces, related to the ancestors, were manifest in natural phenomena (cf. Rostworowski & Morris 1999).

In the first half of the fifteenth century the Inca people gained more power in the region, through fighting and intrigues (Conrad & Demarest 1984: 106ff.), and they became associated with nearby ethnic groups, like the Quechua people. The Incas were united by connecting divine powers to a ruler whose power lay on a national level above the village

level. The ruler resided in Cuzco, and from there the surrounding lands were rapidly subjugated. Pachakuti, who ruled from 1438 until 1471, further transformed Inca society by introducing split inheritance, and an upper class of close associates, the so-called 'panaqa'. Split inheritance implied that when a ruler died, he was treated as alive, with all his former rights and property still intact, guarded by the panaqa. As a consequence, a new ruler had to conquer lands and possessions for himself and his panaqa from scratch. According to Conrad & Demarest (1984: 122), "…split inheritance emerges as a driving force behind the growth of the Inca Empire."

New lands were conquered by brute force, coercion and diplomacy. The Incas built new roads and bridges in their newly acquired territories, to enhance communication and mobilisation. They also built storehouses, religious shrines and new administrative centres (Rostworowski & Morris 1999: 771, 799ff., 811). Especially in the later days of the Empire, large numbers of people were mobilised for service. There was an "enormous *mit'a* workforce, indispensable to the building and running of Tawantinsuyu [Inca Empire, WK]" (Rostworowski & Morris 1999: 821), consisting of retainers on community and state lands, workers in the army, for public works, as postal runners, and last but not least, in the care and upkeep of temples and shrines. Sometimes whole ethnic communities were removed to work somewhere else as *mitmaqs*.

In the 1530s the Inca Empire faced huge internal problems, such as too large a group of panaqas, local uprisings against the Inca power, and competition for the succession to the throne. Therefore, the Spaniards could easily invade and conquer the Empire.

In the earliest period of the Inca Empire, the Incas' native language may have been Pukina, or perhaps also an Aymaran variety. In the vicinity of Cuzco, Quechua was used as a first language. Furthermore, in many areas of the Inca Empire, Quechua probably was already in use as a lingua franca. Although we have no direct evidence of an earlier lingua franca status, the wide and rapid adoption of Quechua as a first and second language under the Incas corroborates this hypothesis. Quechua was also a language of worship, because of the influence of Pacha Kamaq. Under the reign of Huáyna Capac, who ruled from 1493 until 1525, it was decided that Quechua should become the official lingua franca for the whole Inca Empire. The variety of Quechua that was used by the Incas was probably a Quechua IIb variety (Adelaar, pers.comm.). Torero (1974: 141) says:

> "The extent of its [Quechua, WK] spread was such that -according to the chronicler fray Martín de Morúa - the king, Huáyna Cápac, thought it necessary to adopt it as the language of the Cuzco Empire; the language it replaced was -after having served as imperial idiom during the reign of Pachacútec and Túpac Yupanqui- without doubt, Aymara, the other great "general language", and until today the second in importance among the indigenous Andean idioms."[150]

[150] "El grado alcanzado por su expansión era tal que, según el cronista fray Martín de Morúa, el Inca, Huáyna Cápac se vio en la necesidad de adoptarlo como lengua del Imperio cuzqueño; la lengua desplazada en esta función, depués de haber servido como idioma imperial durante los reinados de Pachacútec y Túpac Yupanqui, fue sin duda el Aymara, la otra gran "lengua general", hasta hoy la segunda en importancia entre los idiomas indígenas andinos."

Probably the Incas continued using their original language as well, perhaps as some kind of "secret language" (cf. Cerrón-Palomino 1987: 335).[151]

The Quechua variety that later became known as Cuzco Quechua differs from other Quechua IIc varieties like Ayacucho Quechua especially in its phonology. That is, Cuzco Quechua has three series of plosives, 'normal', affricates, and glottalised, instead of only one as in most other Quechua varieties. This may well reflect the influence of Aymaran phonology. Cuzco Quechua also borrowed many words from Aymara. In addition, there are small differences between Cuzco and Ayacucho Quechua inflectional morphology which are dealt with below.

This all meant that there were various kinds of Quechua at the time. Firstly, Quechua varieties, like Tarma and Huanca Quechua spoken in ethnic communities by native Quechua speakers. All Quechua I varieties are of this type. Secondly, Quechua varieties already used as lingua franca before the emergence of the Inca Empire. Thirdly, a form of Quechua II which was used in Inca administration and as a lingua franca in the Inca Empire.

Inca state employees were obliged to learn Quechua in special schools, and they were encouraged to spread Quechua among their native peoples (cf. Gugenberger 1995: 149). The kind of language policy of the Incas is unclear. According to some sources (cf. Spalding 1999) other languages and cultures were not repressed. Instead, the Inca encouraged linguistic diversity. Since the Incas themselves were used to a situation of multilingualism, it is unlikely they would have considered language diversity a threat to their rule. Spalding (1999: 923) says: "The Inca maintained and perhaps even promoted cultural and linguistic diversity among the various societies that were included in Tawantinsuyu [Inca Empire, WK]." However, according to Adelaar (pers.comm.) these conclusions are doubtful, and it is more likely that language diversity in the Andes at the time was **in spite of** instead of **due to** Inca language policy.

In conclusion, while in several parts of Peru and Ecuador Quechua was already known before the expansion of the Inca Empire, Quechua spread to Bolivia, Argentina and Chile under the Incas. It was learned in special schools, in ethnic interactions and in official Inca religious and administrative transactions. Rostworowski & Morris say (1999: 809): "At places like Huánuco Pampa [one of the major administrative and religious Inca centres, WK], speeches and songs in honor of Inca and native lords were almost certainly heard in 'the language of the Inca' but also in the Quechua and non-Quechua languages of the peoples."

In the next section I will outline what happened to the various Quechua varieties in Peru, Ecuador, Bolivia and Argentina after the Conquest by the Spaniards.

6.1.3 After the Spanish Conquest

After the Conquest the status of Quechua changed. Initially the Spanish government promoted Quechua, but later in the 18th century Quechua was frowned upon, associated with backwardness and its very existence came under threat. I will now sketch how Quechua survived in the Andes, despite this onslaught.

---

[151] This suggests some similarity with colonial language policy in, e.g. Tanzania by the Germans; Swahili was spread by the Germans in their African Empire, while German itself was only used between Germans, and not with Africans.

Spanish colonists, led by Pizarro, invaded the unstable Inca Empire in northern Peru in 1532. By a combination of successful military techniques, intrigues, and sheer luck, their grip on the Andes became stronger, until finally in the second half of the 16th century the Spanish crown took full control (Bakewell 1997: 112). An hierarchical structure was set up consisting of administrative regions, in which the later state borders became visible.

After the Conquest, because of epidemic diseases, wars, famine and exploitation the Andes population decreased by about 70% in the highlands and 96% in some coastal areas (Spalding 1999: 932). Bakewell (1997: 151) comments: "It is arguable that nothing has marked the social history, indeed the entire history, of Middle and South America since 1492 more than the enormous loss of native population that followed the Europeans' arrival." The population of, for instance, Peru before 1492 is estimated to lie between 4 and 15 million, in 1570, 1.3 million, and in 1620 0.7 million, decreasing even further later on. The decline concurred with huge migration streams and local population increases. Saignes says (1999: 92): "…the valleys of Cochabamba doubled their population, with an 83 percent immigrant boom."

Initially the Spanish controlled the Andes through Andean intermediaries; original Andean social and economic structures were preserved, and the Spaniards were not directly involved in labour organisation and production, as long as they could extract enough tribute (Saignes 1999: 66ff.). From the 16th until the 18th century the native Andean nobility, the 'caciques', formed an intermediary class between the indigenous work-force, and the Spanish powers.

Nevertheless, the Spaniards deeply affected Andean society. They forced natives to resettle in so-called 'reducciones' (Saignes 1999: 89), and in towns with an emerging mining industry, especially in Bolivia. The social and demographic changes led to continuing migration on a large scale. Saignes (1999: 88) remarks:

> "…early colonial Peru was a society taking to the roads. Massive numbers of individuals and households "disappeared" from administrative view as they sought opportunity, or simply a way to dodge levies, in far-off cities, estates, mines, textile mills, and villages…The results amounted to a massive replacement; at the end of the 17th century, 'outsiders' made up 80 percent of some Andean towns."

While the Spanish colonists exploited the Andean people as much as possible, the Spanish crown wanted to protect them from immediate extinction. Laws to protect the Indians were introduced, and the reducciones mentioned above were meant to protect them from uncontrolled exploitation by the Spanish colonists. The Spanish Crown also tried to protect Quechua, although the domains in which Quechua was used shrank progressively. For religious and local affairs, it was considered appropriate to speak Quechua, while on other levels, such as trade and administration, Spanish began to dominate.

State and church policy were connected (Bakewell 1987: 129), and the church wanted to win the soul of the Andeans for Christianity (Gugenberger 1995: 154). Therefore, they learned Quechua, in order to proselytise and civilise the Andeans. By these efforts early Quechua grammars were made, often based on several Quechua varieties, probably resembling the Quechua II variety that the Incas used (Adelaar, pers.comm.). In this way the missionaries played a role in promoting a form of standard Quechua (cf. Saignes 1999: 114). In the second half of the 17th century the Cuzco Quechua variety became more important.

In the 18th century the government and the church changed their attitude towards Quechua. They stressed that all people in the Spanish Empire should be united by one language, Spanish, so that Christianity and the cultural norms of Spanish civilisation could be promoted (Gugenberger 1995: 159). In the second half of the 18th century several indigenous rebellions took place in the Andean region, who used the ancient symbols of the Inca period (Bakewell 1997: 282ff.). After these rebellions, the Spanish repression of the Quechua language and culture became more severe, and Quechua was no longer used as an instrument for evangelisation.

Around 1800, European liberal ideologies came to the fore. After liberalisation in Spain itself, all South American countries became independent from Spain in the 1810s and 1820s. In practice, this worsened the position of the Andean indigenous people even more. In the name of equality and progress, laws that protected the indigenous Andeans were abolished, and communal land ownership was no longer acknowledged. For instance, the laws of the Civil Code in 1852 in Peru "marked the beginning of the republic's sustained assault on Indian communities" (Larson 1999: 623). The centre of power moved to the commercial centres at the coast, while inland landowners exploited the indigenous people for land labour, and the independent Andean villages were transformed by early capitalism and market dictates. Moreover, the Andeans were purposely kept isolated from liberal thought and education (Larson 1999: 629). Because southern Peru was more isolated, Quechua survived on a wider scale in the south than in the north.

In the 19th century the dominant position of Spanish culture and language was justified in social-Darwinist discourse (Bakewell 1997: 421ff.). Quechua was now firmly linked to backwardness and poverty. The earlier Spaniards had extirpated Quechua in the name of hispanisation, while the new nations simply did the same in the name of progress. In the 20th century in some ideologies, like Marxism, the repressed position of the Andean population was acknowledged, and towards the end of the century the situation for Quechua improved a little in the Andean nations. However, owing to better communication and more mobility Spanish gained more ground in the Quechua communities. Today in all Andean nations most spheres associated with modernity, like mass media and education are in Spanish, while Quechua is considered to be a language in which social and economic progress is difficult. Today, in 2002, Quechua has at most between 7 and 8 million speakers (Adelaar, pers.comm.).

6.1.3.1 Peruvian Quechua

In the first decades after the Conquest, Quechua remained in use as the lingua franca in southern Peru. It was used among Andean migrants, working for the Spaniards or for local indigenous lords, and it was used as the church language. Later Spanish became more important.

Today, in spite of centuries of repression of the Andean culture, substitution of Quechua by Spanish, and extensive migrations and depopulations,[152] Quechua is still widely spoken, and the complex morphology of varieties like Cuzco and Ayacucho Quechua has

[152] Bakewell (1997: 233) remarks about the situation of Cuzco: "By 1690 almost half the population of the bishopric of Cuzco, covering much of southern highland Peru, consisted of *forasteros* Indians who had left their places of origin for other native villages, estates, or larger towns."

not essentially changed. This conservatism may be a reaction of the Quechua speakers to outside pressure exerted on their culture and language. Phonological and lexical changes, however, did take place under and after the Inca period (cf. Stark 1985c: 533). Another factor for the preservation of inflection may be the stability on the household level. Saignes (1999: 106) says: "Ancestor worship, the cult of sacred places, and ritual and marital exchanges respecting old lines of consanguineal kinship all persisted…*ayllus* were able to defend their territorial integrity and protect the reproduction of their community." In addition, while in earlier days migration took place in several directions, today the main movement is out of the Cuzco area towards the larger cities, especially Lima (cf. Mannheim 1985: 486), which suggests less influence from other regions on Cuzco Quechua.

Another factor for conservatism in Cuzco Quechua is that Cuzco Quechua became the prestige language for the class of Andean nobles, the caciques (see above). They started to use Cuzco Quechua in numerous written works of drama, poetry, religion and journals, and, in Larson's words (1999: 656): "by invoking the region's Inka heritage, Cuzco's cultural vanguard projected a noble 'Quechua race' of Indians onto the national imagery." In spite of later Spanish repressions, the circle of Quechua proponents has remained strong around Cuzco and its variety, Cuzco Quechua (cf. Mannheim 1991: 115). Today, Cuzco Quechua is considered to be the most important Quechua variety by its speakers (Gugenberger 1995: 184). Mannheim (1985: 503) says: "The continued viability of Southern Peruvian Quechua, then, is not only a case of 'language loyalty' in the limited sense of this expression, but reflects a comprehensive loyalty to a way of life with an exclusionary view of social interaction." It is supported by a language academy in Cuzco, and it is associated with an indigenous upper class which considers itself as bearers of the Inca tradition, in contrast with the more agricultural Ayacucho Quechua.

On the other hand, no attempt to give Quechua a status equal to Spanish was made before the 1970s. A census in 1972 confirmed that, out of a Peruvian population of 11,790,000, 25,9% of the people were Quechua speakers, and 11.4% were monolingual Quechua speakers (cf. Mannheim 1985: 485ff; von Gleich 1982: 27). In the district of Cuzco, Quechua was spoken by 81%, and in the district of Ayacucho the figure rose to 90%. Today, Quechua is limited to private use. For all public functions, the mass media and general administration, Spanish is commonly used. Most recent data show that there are hardly more than 3,500,000 speakers of Quechua in Peru which means that not only the relative but also the absolute number of Quechua speakers has decreased, in contrast with earlier years (Adelaar, pers.comm.).

Standardisation of Quechua is more difficult in Peru than in the other Andean countries, since there is far more diversity in Peru, thanks to the Quechua I varieties.

Unlike Ayacucho Quechua, Cuzco Quechua was strongly influenced by Aymara, especially in its lexicon and phonology. While Cuzco Quechua became a second language for many speakers in Argentina and Bolivia (see below), in southern Peru, however, there was a more continuous chain of L1 transmission of Cuzco Quechua.

Between Ayacucho and Cuzco Quechua there is some variation. According to Mannheim (1991) Cuzco Quechua was not preferred above other Quechua varieties or other languages in Peru before the Conquest. Until the 17th century the Spaniards used a partly artificial non-Cuzco variety of Quechua, and Cuzco still did not seem to be a prestige variety. Later its status increased among Quechua noblemen, because it was associated

with the Inca heritage. Today the average Quechua speaker considers Cuzco Quechua to be a more valuable language than Ayacucho Quechua.

6.1.3.2 Bolivian Quechua

It is commonly agreed that Quechua reached Bolivia for the first time under the Incas (cf. Stark 1985c: 530; Van de Kerke 1996a: 1), while other languages, like Aymara and Pukina, remained in use as native languages in Bolivia during this period. In fact, in a large area in the higher Andes, Aymara is still spoken today, and, in some areas in Bolivia, it is even expanding at the expense of Quechua. Under the Incas probably several languages were learned as second languages, among them Quechua. Its acquisition was probably directed and stimulated by the large amount of mit'a workers, many of whom must have spoken Quechua.

Quechua was established and expanded in Bolivia after the fall of the Inca Empire for two reasons. First of all, a variety of Quechua - probably a Quechua IIb variety - was used in the Catholic Church as an instrument for the spread of the Christian faith between the 16th and the end of the 18th century. Secondly, during Spanish rule speakers of Quechua and other indigenous languages from various parts of the Andes were sent to Bolivia to work, especially in the mines of Potosi and Oruro, probably to an even greater extent than when under the Incas. Many towns were newly founded by the Spaniards, like Cochabamba, - whose particular Quechua variety is under scrutiny here - which attracted 83 percent of immigrants in the first decades after the Spanish Conquest. Towns, like the mining cities of Potosi and Oruro, were also buzzling centres of activity and trade (Saignes 1999: 95). In these towns, Quechua became the most important language, and since it was supported by the church as well, it slowly became established in more and more areas of Bolivia. It eventually expanded to parts of the Aymara heartland and to the Amazon lowland. Today Aymara is associated with villages and Quechua with small towns (Muysken, pers.comm.).

Bolivian Quechua was shaped when Aymara speakers adopted Quechua from Inca and Spanish rulers and from Quechua migrants. Several Quechua varieties play a role in the emergence of Bolivian Quechua. Under the Incas it was the 'lengua general', that was used, while in the first years of Spanish rule the Spaniards used a partly artificial Quechua (see above). The Quechua migrants spoke several varieties, but the most dominant, however, was Cuzco Quechua. Another factor underlying the rise of Bolivian Quechua was the separation of the Bolivian people from the Quechua heartland by a large area where only Aymara was spoken.

There are some minor differences between Bolivian Quechua varieties. In the district of Cochabamba the urban variety differs from the rural variety, while these two dialects differ from Quechua as spoken in Potosi (cf. Lakämper & Wunderlich 1998: 139). Furthermore, Northern and Southern Bolivian Quechua differ as well (cf. Cerrón-Palomino 1987: 244). Variation is found, not only in the lexicon and the phonology, but also in the verbal inflection (cf. section 6.3.1).

Cochabamba Quechua has no written literary tradition, and neither does it have a language academy, directed towards some kind of older norm, as in Cuzco. Nevertheless, Bolivian Quechua has probably had quite some prestige over the years. During the rebellions of the late 18th century, the language and history of the Quechua speakers was invoked and Quechua rebellion was clearly separate from Aymara rebellion (cf.

Bakewell 1987: 281). Before 1800 it probably had also some prestige as the language of evangelisation, in contrast with smaller Andean and Amazonian languages.

Today the more educated speakers appreciate Quechua, and encourage the recitation and writing of Quechua poetry and prose. In Cochabamba Quechua is also associated with peasant organisations and workers organisations, and it plays a role in self-identity. Stark (1985c: 538) remarks that the prestige of a Quechua speaker rises when she uses a high "degree of suffix density".

According to Albó (1995: 19) there are 2,194,100 speakers of Quechua in Bolivia, which is about 25% of the total population. As in the other Quechua varieties, the most important influences brought to bear upon the language, are from Spanish, and most speakers are bilingual; this is most notable in the lexicon. The city of Cochabamba is rapidly growing and counts approximately 800,000 inhabitants today (cf. World Gazetteer Report 2002).

6.1.3.3 Argentinean Quechua

In Argentina Quechua is spoken in two regions in the north. In the northern province of Jujuy, close to the Bolivian border Quechua was spoken but is nearly extinct today. The variety I consider here is spoken a few hundred kilometres to the south, in Santiago del Estero, by about 60,000 people (Grimes 2002).

Not much is known about the history of Argentinean Quechua. It remains a matter of conjecture as to whether it was even used during the Inca Empire. It is agreed that the Inca empire and its Quechua lingua franca stretched out over the Andean area of western Argentina and northern Chile. However, whether there had been Inca settlements as far east, and at such low altitudes as Santiago del Estero remains disputed.

According to Stark (1985b) the Incas must have brought Quechua to the area of Santiago del Estero. She argues that archaeological and ethno-historical evidence indicate that there were Inca roads and buildings in what is today Santiago del Estero (Stark 1985b: 734ff.). Bravo (1989: 129ff.) suggests that lack of archaeological remains indicates that the Incas only passed north eastern Argentina on their way to Chile, and that they did not settle in the region of Santiago del Estero.

The Argentinean Quechua variety itself gives no clear indication of exactly when and by whom Quechua was brought to Argentina. On the one hand, the lack of aspirated and glottalised plosives in Argentinean Quechua in contrast with the presence of them in Cuzco Quechua, might suggest that Cuzco Quechua is less involved in the emergence of Argentinean Quechua. However, the lack of glottalisation and aspiration could also be the result of the same simplification process as is apparent from inflectional morphology (cf. also the discussion in Cerrón-Palomino 1987: 345ff.).

After the conquest by the Spaniards Quechua played an important role as the lingua franca in the area. In 1542 an expedition starting from Cuzco, under the direction of the Spaniards, conquered north eastern Argentina, and it was absorbed into the Spanish Empire.

Soon, the Spaniards applied the same resettlement policy for the native population as elsewhere. Quechua speakers from the Andes, and local smaller ethnic groups of speakers of several languages like Lule, Diaguita and Comechingone were forced to live

in so-called 'encomiendas', so as to be easily accessible for Spanish taxation and exploitation (cf. Stark 1985b: 738).

In these settlements Quechua not only became the lingua franca between Quechua speakers and other groups, but also between the native ethnic groups themselves, and soon Spaniards used Quechua as well. After the Spanish Conquest in Argentina the indigenous people suffered from the exploitation in the mines and on the fields, and especially from epidemic diseases. In Argentina, like in other parts of the Andes (see above), the native population rapidly declined, especially among the most severely exploited and weakest local ethnic groups. Quechua could spread more easily among these local ethnic groups due to the breakdown of their social and cultural fabric (Stark 1985b: 740).

As in Bolivia and other regions of the Andes, the adoption of Quechua was promoted even further by its use in church and missionary activities. Bravo (1989: 141) remarks: "All our findings permit us to sustain that the Quechua language entered Santiago del Estero with the Spanish invasion, diffused with the Conquest, and consolidated during the colony with the persistent baptising action by the Christian evangelists…"[153] The 16th, and especially the 17th and 18th centuries must be the heydays of Quechua in Argentina, and after the defeat of the indigenous groups of the Diaguita's around 1660 it was probably spoken in a wide region, from Santiago to the Bolivian and Chilean border.

By the end of the Colonial period other smaller Indian languages besides Quechua had been lost (Cerrón-Palomino 1987: 71), and Quechua was adopted by the local 'criollos' from mixed Spanish-Indian descent. In other Spanish colonial towns Quechua was not learned by the Spaniards. In Santiago del Estero, however, they were too small a minority amidst numerous Quechua speakers to stick to Spanish alone. Moreover, Santiago was rather isolated from the rest of the Spanish-speaking world, and the Spaniards became mixed with the native population.

At the end of the 18th century, Indian culture was considered backward and anti-modern, and it was strongly discouraged by the Spaniards (cf. section 6.1.3). Instead, Spanish values and language were promoted. By the 19th and 20th centuries this policy had reduced the area where Quechua was spoken to the city of Santiago del Estero and surroundings. In that area, however, Quechua remained viable. Santiago had turned into a city mainly inhabited by criollos, who spoke Quechua but did not associate the language with other indigenous or Inca values, as in other Andean countries. According to Bravo (1989: 173) Quechua is not correlated with any particular kind of social or cultural identity: "The Quechua-Castillian bilingualism of Santiago del Estero is a purely linguistic problem without any correlation in the anthropo-socio-cultural state of the population…The human type of the people of Santiago is colonial creole in the whole province."[154] More recently, Santiago has become closely linked to the modern Latin-American world, and today Quechua is spoken mainly by the lower classes and farmers. As a result it is less prestigious than Spanish.

---

[153] "Todas nuestras constancias nos permiten sostener que la lengua quichua entró en Santiago del Estero con la invasión española, se difundió con la conquista y se consolidó durante la colonia con la tesonera acción catequizadora de los evangelizadores cristianos…"

[154] "El bilingüismo quichua-castellano de Santiago del Estero es un problema puramente lingüístico sin incidencia alguna en el estado antropo-socio-cultural de la población…El tipo humano de la población santiagueña es el criollo colonial en toda la provincia."

Today more attention is paid to its preservation; it is taught at the university of Santiago del Estero, promoted in local schools and used in radio and newspapers. At present only a small minority speak Quechua; out of the 806,000 inhabitants of the province of Santiago only 7.4% speak Quechua (World Gazetteer Report 2002).

In summary, it is possible that Quechua first came to Argentina under Inca rule. Its further spread and consolidation took place, however, under the Spaniards. In comparison with the spread of Quechua in Bolivia, the Quechua language easily and quickly assimilated in Santiago del Estero. In north Argentina there were probably relatively many Quechua speakers and fewer non-Quechua speakers. Moreover, the non-Quechua speakers -Spaniards, and various ethnic groups- were more fragmented than the Aymara speaking population in Bolivia.

The heterogeneity of speakers who transmitted Quechua must have been higher than in Peru or Bolivia. First and second language speakers of Quechua, Andean migrant workers from diverse Quechua varieties and other Andean languages, Spanish colonists and Spanish priests were all involved in the further spread and development of Quechua in northern Argentina. Therefore, the model of what was "proper Quechua" was less circumscribed than in Bolivia. It was a mix of different native, koineised and second language varieties of Quechua. In section 6.3 I show how the influence of Quechua varieties from Cuzco, Ayacucho, Cajamarca and Bolivia is visible in the inflection in Argentinean Quechua.

In Santiago del Estero itself there is no known dialect variation. During the settlement and harmonisation of Quechua between the 16th and 18th centuries there probably was variation in the level of competence in Quechua.

Like Bolivian Quechua, Argentinean Quechua does not have a written literary tradition. Quechua had probably more prestige than local Indian languages in the 16th until 18th centuries, since it was used as an instrument of evangelisation. More recently, Quechua is used in the media and studied at the university of Santiago del Estero. Like most Quechua varieties, Argentinean Quechua has less status than Spanish.

6.1.3.4 Ecuadorian Quechua

Traditionally all Quechua varieties were thought to be derived from Cuzco Quechua, and spread through Inca conquest. However, Torero (1964) and Parker (1963) have shown that Cuzco Quechua was not the oldest Quechua variety, and that Quechua was not only spread by the Incas.

Quechua was probably already spoken in Ecuador before the Inca Conquest (cf. Cerrón-Palomino 1987: 343). Indications of the early introduction of Quechua are, first, the irregular correspondence between aspirated stops in Ecuadorian and Cuzco Quechua. This suggests that the relation of Ecuadorian with Cuzco Quechua was one of adstrate rather than direct ancestry. Secondly, there are Spanish sources that refer to the existence of Quechua in Ecuador before the Incas arrived. Assuming early Quechua in Ecuador, the question remains how it spread there. Stark (1985a) suggests that Quechua originates from the Ecuadorian lowlands. However, this idea is rejected by most Quechua specialists in favour of theories that emphasise early contacts between Peruvian traders and Ecuador (cf. Cerrón-Palomino 1987: 338ff; Hartmann 1979; Muysken 1977; Torero 1984).

Torero (1984) argues that from the first centuries of the 2nd millennium until the late 19th century, there were intensive contacts between Ecuador and coastal and highland Peru. The earliest of these contacts would have taken place from the Peruvian coastal Chincha region, 185 km south of Lima. In that early period Quechua II branched out and moved eastwards, while Quechua IIb was spread to Ecuador by traders. Torero (1984: 372) says:

> "It can be postulated, then, that, apart from its area of full presence along the central and southern coast of Peru and in the contiguous highlands to the east, Chinchay Quechua began to penetrate into more distant regions as a vernacular language, adopted by the nobility and the traders interested in interregional Andean trade, and it would have been respected because of the economic power of Chincha and the religious and political influence of Pachacamac."[155]

Therefore, as is also reported in Spanish sources, the Incas met speakers of Quechua in Ecuador, and they imposed their own form as an adstrate or superstrate. The Inca occupation meant that, in addition to the Inca Quechua variety, other Quechua and non-Quechua languages came to Ecuador. The Inca soldiers and the *mitmaq*, which were forced settlers, spoke Aymara, Quechua IIc varieties like Cuzco Quechua, and also Pukina, Quechua IIa and Quechua I varieties (Torero 1984: 378). After the Spaniards had conquered Ecuador, many of these Andean immigrants in Ecuador stayed, and they may have influenced the development of Quechua.

Today Quechua has about 1.5 million speakers in Ecuador, while the second largest indigenous language, Shuar, has only 30,000 (Grimes 2002). However, in the 16th century, after the Spanish conquest, Quechua was not yet so dominant. Several sources mention that Quechua was even on the decline in the 16th century (Adelaar, pers.comm.). Although Quechua was used by Spanish missionaries, it is unlikely that the spread of Quechua was only due to missionary activities. Moreover, the Spanish church also employed other languages in addition to Quechua.

Probably other social processes have had a greater role in the spread of Quechua. Large parts of the native population died at the end of the Inca period due to the civil war between Inca factions, and this depopulation continued after the Spanish conquest; in the Quito region even about 90% (cf. Powers 1995: 17). In addition, the Spaniards had a tremendous impact on the social and economic reality of the Andean population. Muysken (1977: 31ff. and pers.comm.) suggests that the Andeans reacted to their new circumstances by creating a new identity, which was no longer associated with a local small ethnic group, but instead, to a larger indigenous 'runa' caste whose speech became Quechua. While before the Spanish conquest Quechua was spoken only by some traders and by the higher classes involved in Inca administration, after the Conquest it became the emblem of Andean non-Spanish identity. During the demographic, political and social changes between the 15th and 18th centuries Quechua spread increasingly in this new role over the Andean highlands of Ecuador at the expense of other indigenous languages, many of which may have been Barbacoan.

---

[155] "Puede postularse, entonces, que, aparte de su área de pleno dominio en la costa peruana central y sur y la serranía contigua a ésta, el Quechua chínchay empezó a penetrar en regiones muy distantes como lengua de relación adoptada por los señores y los mercaderes interesados en el comercio interregional andino y respaldada por el poder económico de Chinca y el ascendiente religioso y político de Pachacámac."

In comparison with the Inca period the use of Quechua increased after the Spanish conquest. While it is unlikely that the Incas dominated lowland territory east of the Ecuadorian Andes, Quechua later spread to this tropical forest zone. Quechua reached the lowlands by a combination of factors (cf. Muysken 2000: 976ff.). Traders, refugees from Spanish colonisation and Spanish missionaries all came down from the highlands to the lowlands, where they made Quechua more popular. However, according to Muysken (2000: 978) it is mainly due to demographic changes in the lowlands themselves that Quechua was adopted as a native language. Groups of forest dwellers and nomads like the Záparos and Waorani, had declined in number and switched to Quechua, thus reintegrating into new communities. In fact, this Quechua dialect which spread to the lowlands is rather similar to the Quechua which spread to the highlands. In both cases, population decline and social and economic changes facilitated the spread of Quechua because of its association with indigenous identity.

Today, as in other Andean countries, use of Ecuadorian Quechua is more accepted and in 1992 a law was introduced that guaranteed education in one's native language. Standardisation of Ecuadorian Quechua presents less problems than in Peru, though the Ecuadorian writing system deviates from those of Bolivia and Peru.

In summary, Quechua was first adopted in Ecuador as a trade language. How many of the traders spoke Quechua as a native language, and to what extent Quechua was used between non-native Quechua speakers remains unknown. The second Quechua wave came through the Inca expansion, because of which Inca Quechua spread over the first layer of Quechua IIb speakers, and gained new L2 speakers. After an initial decrease due to the decline in population during and after the Inca civil war Quechua began to extend its domain as the indigenous lingua franca that expressed Andean identity. Probably only in the 18th century did Quechua-isation reach its peak. In contrast with Bolivia the native languages of the new Quechua speakers in Ecuador were not structurally similar to Quechua.

6.1.4 Summary and conclusion

We expect early koineisation and simplification in Cuzco and Ayacucho varieties, because of the common histories of migration and population changes. In comparison with the other Quechua varieties under discussion, we expect less inflectional change in Ayacucho and Cuzco Quechua, since these have not been adopted as a second language by large groups of L2 learners. Cuzco Quechua has enjoyed greater popularity than Ayacucho Quechua during the last centuries, and we expect, therefore, less changes and a stricter norm.[156] The Bolivian Quechua speech community has more Type 2 characteristics than the Cuzco Quechua one, since Bolivian Quechua was learned as a second language by Aymaran speakers who possibly did not have full access to the native variety of Cuzco Quechua. Moreover, the ancient glorious past of the Inca Empire is less a source of conservatism in Bolivia than in Cuzco.

The L2 acquisition process must have been relatively rapid in Argentina. Moreover, there have been mutual influences between Quechua varieties because of the interaction

[156] One of the linguistic consequences of this prestige is that for a long time Cuzco Quechua has automatically been assumed to be the oldest Quechua variety, from which all other varieties would only be deviations, or, 'corruptions' (cf. Cerron-Palomino 1987: 243).

between Quechua speakers from different descent, and migrations of workers from and to the mines in northern Argentina and Bolivia. Quechua has had no special prestige over the centuries, and during the last two hundred years its popularity has declined in Argentina. The Argentinean Quechua speech community has, therefore, been historically closer to a Type 2 community than those in Bolivia and Peru. In the early days of Ecuadorian Quechua, there may have been internal variation in Quechua, because Quechua was learned by Andeans of different backgrounds, and different varieties of Quechua were in use. In pre-Inca times, Quechua was learned as a practical communication tool in trade relations. Under the Incas it was still in use as a lingua franca, but it was also associated with the ruling Empire. Under the Spaniards it became the marker of Andean identity. Among the Quechua communities discussed here, the Ecuadorian one displays most traits of a Type 2 speech community.

In Table 6.2 I summarise and compare the four Quechua varieties with respect to the social factors relevant here.

Table 6.2 Social factors distinguishing Quechua speech communities

	Cuzco	Bolivian	Argentinean	Ecuadorian
Source language	Quechua IIc	Cuzco Quechua/ Quechua II	Cuzco Quechua/ Quechua II	Quechua IIb/ Inca Quechua
Split from the original language since[157]	15th century	After 1470	After 1532	15th century
Reason of spread	Adoption of Quechua as prestige language of pilgrimage centre	Lingua franca under the Incas and the Spaniards/Migration/ Language of evangelisation	Lingua franca under the Incas (?) and the Spaniards/Migration/ Language of evangelisation	Trade language/ Ethnic restructuring/ Language of evangelisation
Speed of spread	Very slow until 1500, but later outside Cuzco more rapidly	Slow	Faster	Slow
Adjacent to the region of the source language?	Yes	No, but with contact with the source	No, and with little contact with the source	No contact with the source
Kind of learners during the first contact period	Children/Adults	Children/Adults	Children/Adults	Mainly adults
Substrates/ adstrates	Aymara, Spanish	Aymara, Spanish	Aymara, Spanish, and others	Spanish and others

[157] This label may seem artificial. However, I have introduced it to indicate roughly how much time had passed since the change began.

	Cuzco	Bolivian	Argentinean	Ecuadorian
Status of ad/substrate	Aymara: Low? Spanish: High	Aymara: Low? Spanish: High	Non-Spanish: Neutral? Spanish: High	Indigenous: Low? Spanish: High
Kind of substrate/ adstrate	Aymara: Unrelated though similar. Spanish: Unrelated	Aymara: Unrelated though similar. Spanish: Unrelated	Aymara: Unrelated though similar Non-Aymara and Spanish: Unrelated	Aymara: Unrelated though similar Non-Aymara and Spanish: Unrelated
Amount of contact between Quechua and other languages after the split	Much (Spanish)	Much (Spanish, Aymara)	Much (Spanish, and decreasingly, non-Aymara)	much (Spanish, and decreasingly, non-Aymara)
Reason of this contact	Colonisation	Colonisation/ co-habitation	Colonisation/ co-habitation	Colonisation/ co-habitation
Time scale of this contact	About 500 years	About 500 years	About 500 years	About 500 years
Extent and nature of the influence of second language learners	Low, similar substrate	High, similar substrate, imperfect learning	High, various substrates, imperfect learning	High, various substrates, imperfect learning
Evaluation by the new speakers of Quechua during the contact period	Neutral	High	Neutral	Neutral
Kind of network structure for the language	tight	tight	loose	loose

6.2 Cuzco and Ayacucho Quechua

6.2.1 Data

Quechua is a highly synthetic and agglutinative language. That is, the number of categories comprised in a word is high, while the number of semantic categories expressed in each affix is low. Categories like causative, benefactive, and reciprocal belong to derivation (cf. Cerrón-Palomino 1987: 280ff.) and are expressed closer to the root of the verb than the inflectional categories.

The inflectional categories of the verb in Quechua on which I focus are tense, subject agreement, object agreement and number. The category of number remains restricted to Quechua II varieties. Quechua I, and other languages in the region, like Aymara do not have an inflectional number category. Other categories such as modality and aspect will not be considered here. Aspectual notions are expressed in derivational morphology in

Quechua,[158] while modality is expressed in verb-final particles or clitics. Cerrón-Palomino (1987) also discusses the categories of conditionality, subordination and imperativeness under the heading of inflection. I omit these for the sake of brevity and because the most relevant differences between the varieties I discuss lie in person and number agreement.

The general order in verbal inflectional morphology in all Quechua II varieties is (Der stands for derivational affixes):

Verb - Der- Obj -Tense - Sub - Num- Mood.

Example (1) is a Cuzco Quechua verb containing all the categories I discuss here (Cusihuaman 1976: 169).

(1) Yanapa- wa- rqa- nki- ku.
help- 1ST- PAST- 2ND- PL(EXCL)
'You have helped us (excl.).'

Below we see that the various Quechua varieties deviate in different ways from this order. Some categories appear in fused forms, sometimes the order itself deviates, and sometimes the meaning of the affixes is dependent on the meaning of other affixes.

The data on Cuzco Quechua are from Cerrón-Palomino (1987), Cusihuaman (1976), Lakämper and Wunderlich (1998), Lefebvre & Muysken (1988) and Van de Kerke (1996a). The data on Ayacucho Quechua come from Parker (1969a).

In Table 6.3 I show the inflectional systems of Cuzco and Ayacucho Quechua. Each column refers to a different object, and each row to a different subject. The endings which these different subject-object combinations display are spelled out in the cells. The forms that differ morphologically in Cuzco and Ayacucho Quechua are in bold italics. There are also some slight phonological differences between Cuzco and Ayacucho Quechua, which I do not discuss. When there are phonological differences, I give the Cuzco phonological forms.[159] The past tense paradigm consists of two paradigms, with *rqa* for the perfect past and *sqa* for the reportative past (Cusihuaman (1976: 168, 170).

Table 6.3 Cuzco and Ayacucho Quechua verb inflection
C=Cuzco Quechua; A=Ayacucho Quechua
Present tense

	1sing obj	2 sing	1plur.inc	1plur.exc	2plur.	3/no obj.
1 sg sub	*	-yki	*	*	-yki-cis	-ni
2 sg	-wa-nki	*	*	-wa-nki-ku	*	-nki
3 sg	-wa-n	-sunki	-wa-ncis	-wa-n-ku	-sunki-cis	-n
1pl.inc	*	*	*	*	*	-ncis
1pl.exc	*	-yki-ku	*	*	-yki-ku	**C:-y-ku A: ni-ku**
2pl	-wa-nki-cis	*	*	-wa-nki-ku	*	-nki-cis
3pl	**C:-wa-n-ku A:-wa-n**	**C:-sunki-ku A:-sunki**	-wa-ncis	-wa-n-ku	-sunki-cis	-n-ku

[158] However, cf. Parker (1969a) and section 6.2.1.1 for an alternative vision on tense and aspect in Quechua.
[159] The main phonological difference relevant here is the Ayacucho inclusive marker *cik* instead of Cuzco *cis*.

Past tense (with *rqa*)

	1sing obj	2sing	1plur.inc
1 sg sub	*	-rqa-yki	*
2 sg	-wa-rqa-nki	*	*
3 sg	-wa-rqa-n	**C:-rqa-sunki/A:-su-rqa-nki**	-wa-rqa-ncis
1pl.inc	*	*	*
1pl.exc	*	-rqa-yki-ku	*
2pl	-wa-rqa-nki-cis	*	*
3pl	**C:-wa-rqa-n-ku/A:-wa-rqa-n**	**C:-rqa-sunki-ku/A:-su-rqa-nki**	-wa-rqa-ncis

	1plur.exc.obj	2plur	3/ no obj.
1 sg sub	*	-rqa-yki-cis	-rqa-ni
2 sg	-wa-rqa-nki-ku	*	-rqa-nki
3 sg	-wa-rqa-n-ku	**C:-rqa-sunki-cis/A:-su-rqa-nki-cik**	-rqa
1pl.inc	*	*	-rqa-ncis
1pl.exc	*	-rqa-yki-ku	C:**-rqa-y-ku/A:-rqa-ni-ku**
2pl	-wa-rqa-nki-ku	*	-rqa-nki-cis
3pl	-wa-rqa-n-ku	**C:-rqa-sunki-cis/A: su-rqa-nki-cik**	-rqa-ku

Future tense

	1sing obj	2sing	1plur.inc
1 sg sub	*	-sqa-yki	*
2 sg	-wa-nki	*	*
3 sg	-wa-nqa	-sunki	-wa-sun/ -wa-suncis
1pl.inc	*	*	*
1pl.exc	*	-sqa-yki-ku	*
2pl	-wa-nki-cis	*	*
3pl	**C:-wa-nqa-ku / A:wa-nqa**	**C:-sunki-ku / A:sunki**	-wa-sun/ -wa-suncis

	1plur.exc.obj	2plur	3/no obj
1 sg sub	*	-sqa-yki-cis	-saq
2 sg	-wa-nki-ku	*	-nki
3 sg	-wa-nqa-ku	-sunki-cis	-nqa
1pl.inc	*	*	-sun/-suncis
1pl.exc	*	-sqa-yki-ku	-saq-ku
2pl	-wa-nki-ku	*	-nki-cis
3pl	-wa-nqa-ku	-sunki-cis	-nqa-ku

6.2.1.1 Tense

There are three kinds of tense: present, past and future. In the present tense paradigm there is no tense marker. There are two kinds of past tense, expressed by *rqa* and *sqa*. The suffix *rqa* expresses a simple past, while *sqa* expresses a 'narrative past', also called, 'reportative past' or 'sudden discovery tense'. This suffix has a less distinct meaning than *rqa* (Cerrón-Palomino 1987: 273; Parker 1969a: 47). Future is expressed by several forms in the future tense paradigm, *saq* in the 1SG.SUB, *nqa* in the 3SG.SUB, and with help of other allomorphs as well. In forms with a 1SUB and a 2OBJ the allomorph of *saq* is *sqa,* identical to the past narrative tense.

Examples of full verb forms are, *riku-wa-nki,* 'you (will) see me', *riku-wa-rqa-nki,* 'you saw me', *riku-saq-ku*, 'we (excl.) will see', *riku-sqa-yki-ku*, 'we (excl.) saw/ will see you (sing/plur)'.

Unlike Cerrón-Palomino (1987), Parker (1969a) splits Ayacucho Quechua *rqa, sqa,* and *nqa* further into an aspectual affix, *-r-,-s-,* or *-n-,* and a tense affix, *-qa-*. In contrast with a mono-affixal analysis Parker's analysis captures some generalisations concerning the occurrence of *-n-* in both the *nqa* form, and the 3rd person subject forms. However, in this analysis some unmotivated allomorphy still remains. For example, Parker (1969a: 26ff.) generalises over *saq, sqa, nqa,* and *n,* and reduces them to three affixes, *SA, QA* and *N.* Nevertheless, *SA* and *QA* must have several allomorphs, and *N* must have some unmotivated conditions of occurrence to account for all Cuzco forms containing these more abstract morphemes. Here we see again that if we analyse irregularities by some abstractions, the complexities of the surface forms reappear on another level of analysis (e.g. on the number of allomorphs, or the conditions of allomorphy).

6.2.1.2 Agreement

In Cuzco Quechua there is subject agreement with 1st, 2nd, 3rd and 4th person subjects.[160] These persons are defined by the two parameters of +/-speaker and +/- addressee. Number is expressed separately from the expression of person. I will call the 4th person also '1+2' or '1st person plural inclusive'.

Table 6.4 Analysis of the category of 'person' in Quechua

	+addressee	-addressee
+ speaker	4: -ncis, 'I and you'	1: -ni, 'I'
-speaker	2: -nki, 'you (sing)'	3: -n, 'he', 'she', 'it'

The 1st person subject agreement affix displays some allomorphy, conditioned both by the person category of object agreement, by number and by tense. When there is no object, or a third person object, the 1st person singular affix is *ni*. This is typical for Quechua II varieties. Quechua I varieties are characterised by vowel length as expression of the 1st person subject (cf. for instance Tarma Quechua, Adelaar 1977). When there is a 2nd person object, Cuzco Quechua uses a fused morpheme, which is, *yki*. When in Cuzco Quechua the first person is in the plural *y* is used instead of *ni,* which is also used in nominal possessive inflection. Ayacucho Quechua has *ni* in both singular and plural 1st person.

The 2nd person subject agreement affix is *nki*. The 3rd person subject agreement affix is *n* or zero, depending on tense, plurality, and object agreement. (For an alternative analysis of *n,* cf. last section). The 4th person subject is *-ncis*, and in the future *-sun(cis)* is used.

Object agreement is expressed in two ways, either by an object agreement marker before the tense affix, which is always a 1st person marker, or by a fused morpheme in which a 2nd person object is fused with a 1st or 3rd person subject.

---

[160] Lefebvre & Dubuisson (1977) analyse Cuzco Quechua as having only three persons. The advantage of such an analysis is that it explains why the *-ncis* form cannot be pluralised, and also why *-ncis* and the plural marker *-cis* have such similar forms. I maintain however the more common analysis of Quechua studies with four persons.

Apart from the deviations discussed above, person agreement is as in Table 6.5.

Table 6.5 Person agreement affixes in Cuzco Quechua

	1.obj	(sub)
1.sub		ni
2.sub	wa	nki
3.sub	wa	n
1+2.sub		ncis
1.sub→2.obj		yki
3.sub→2.obj	su	nki
3.sub→1.plur.incl.obj	wa	ncis

Cuzco and Ayacucho Quechua have singular and plural number.[161] The plural marker is *-ku* for the first and third person, which I will call the 'exclusive plural marker', and *-cis* for the second person, which I will call the 'inclusive plural marker'. Number is separately expressed in Quechua II, and its reference is flexible. That is, a number affix may refer either to the plurality of the subject or the plurality of the object in Cuzco Quechua, irrespective of whether the subject or object markers are adjacent to the number marker, for example, *riku-wa-rqa-n-ku*, may mean either 'he saw us', or 'they saw me', or 'they saw us'. The last interpretation is also possible, because it is impossible in Quechua to have two inflectional number affixes in one word, which results in underspecification when both subject and object are plural (cf. Lefebvre & Muysken 1988).[162] According to Lefebvre & Dubuisson (1977: 69) interpretation of plural affixes depends on the hierarchy 1>2>3, excluding the interpretation 'they saw me' for *riku-wa-rqa-n-ku*. According to Cerron-Pálomino (1987: 277), however, there is no such hierarchy. Plural marking is optional for 3rd person subjects.

6.2.2 Analysis

6.2.2.1 Economy

The categories expressed in Cuzco Quechua are tense, subject and object agreement, and number. Economy plays a role in number agreement. When both the subject and the object agreement are plural, this is only expressed once.

There is also some Economy in the category of tense. There is no difference between a present and a future tense when there is a second person subject, or when there is a third person subject with a second person object.

6.2.2.2 Transparency

The structure of Quechua looks rather transparent. There is a template, in which the mono-categorical affixes are often inserted without context restrictions, and without assimilation:

[161] In an analysis with only three persons, we need two kinds of plurals, an inclusive and an exclusive, to differentiate between '1+2', and '1+3'.

[162] According to Cerrón-Palomino (1987: 277), double plurals are possible. However, this is probably only possible in a few restricted areas (cf. Lakämper & Wunderlich 1998).

Verb - Der - Obj - Tense - Sub - Num - Mood.

However, in several instances there are deviations from the ideal of full Transparency, to which I turn to now.

Fusion and allomorphy

In Cuzco Quechua, there are several affixes that could be analysed as consisting of **two** affixes that show allomorphy, or as **one** affix that shows fusion. In the last section we saw an example of two such analyses of the tense affix. Here I will discuss fusion and allomorphy of person and number affixes.

First of all, in Cuzco Quechua we have the affixes *sunki*, and *sun/suncis*. There is no clear separate meaning of *-su-* in Quechua I and in the older Quechua IIc varieties, like Cuzco and Ayacucho Quechua. In Ayacucho *su* appears as a separate suffix in:

(2) Riku- su- rqa- nki- cik.
see- 'su'-PAST- 2-PL
'He saw you all.'

In example (3) *-su-* is an inseparable part of a larger unit, *-suncik*.

(3) Riku- su.n(cik).
see- ?su?-?1+2?
'We will see (him).'

(4) Riku- wa- su.n(cik).
see- 1OBJ- su-?1+2?
'He will see us.'

In spite of the stable form of the *su*-affix, it is impossible to establish one meaning for all these examples in Ayacucho Quechua. Parker (1969a: 27) provides *su* in Ayacucho Quechua with two unrelated partial meanings, "1st person plural inclusive future", and "addressee as object of third person action". Moreover, these two meanings must interact with abstract allomorphs of other morphemes to result into the complete meaning for the whole form.

An alternative solution would be to assign the meaning '3rd person' to *su*, and to derive the direction of agentivity separate from the individual affixes. We could stipulate that in the unmarked case there is a hierarchy from 1st to 3rd to 2nd person, which determines the affix order, and which would explain the affix sequences of *su-nki, y-ki,* and *su-n(cis)* (cf. Lefebvre & Dubuisson 1977: 49ff. for such a view). However, it would still not explain why *sun(cis)* differs from *ncis* in being future instead of present tense, and furthermore, an extra principle of agentivity is needed while considerable allomorphy would still appear in the analysis of forms like *y-ki* versus *wa-nki.* Moreover, the alternant of *suncis*, namely *sun*, which is historically the earlier variant, remains unexplained.

In Ayacucho Quechua we may be tempted to give *su* an independent meaning, since it appears as an independent affix in some of the cases above. In Cuzco Quechua *su* does not often appear as a separable suffix, being immediately followed by *nki*, or *n(cis)*.[163]

[163] Decisive is whether tense markers like *-rqa-* and *-sqa-* can come between *-su-* and *-nki-* or not. According to Cusihuaman (1976: 169, 172) *-rqa-* cannot intervene, cf. also Cerrón-Palomino (1987: 278): "It is noted that in Cuzco Quechua the combination of second person object and past tense is in inverse order, cf., ***pusa-rqa-su-nki,*** *etc*" (Nótese que en el cuzqueño la combinación de

Therefore, in Cuzco Quechua an analysis in which *sunki* and *sun(cis)* are fused forms with non-composable meanings becomes more plausible. The disadvantage of such an analysis is that in Quechua affixes are usually less heavy. In addition, in such an analysis meaning correspondences between *sunki* and *sun(cis)* are lost.

Irrespective of how we analyse *su*, forms with *su* violate principles headed under Transparency, whether it is "No Fusion", or "No Allomorphy". In 6.3.3.2 I will discuss the status of *su* in other Quechua varieties, and we will see, that the non-transparency of *su* is repaired in different ways in northern and southern Quechua.

For *yki* there is a similar argument, because the *yki* form could be divided into *y-* and *-ki* (cf. Lefebvre & Dubuisson 1977: 46). Such an analysis would reduce the amount of fusion, but introduce more allomorphy. In addition, it leads to the same problem of agentivity. That is, how do we know that the first person is the subject in *y-ki,* and not the second person? The form *yki* is more plausibly analysed as a fused affix than *su-nki* because in no Quechua variety does it appear as two separate affixes. Moreover, phonologically it is less complex in shape than other fused (derivational) affixes such as *yku* or *rqu*.

The suffixes, *ncis*, *yku,* and *wancis* present similar problems. When we analyse these as consisting of two affixes, we need more allomorphy. When we analyse them as mono-suffixal we lose meaning correspondences with other affixes. Again, the actual analyses depend on the phonological shape, the independence of the meanings of the parts, and the occurrence of the parts elsewhere.

Finally, the future 1st person affix is *saq*, which is either a fused affix, or consists of two allomorphs, a 1st person future affix *sa* and an allomorph *q* of a non-present tense affix, *qa* (cf. Parker 1969a: 27, 48).

In addition to these disputable forms, there is also some allomorphy between a zero affix for third person subject, and an *-n-* affix.

Homonymy

In Cuzco and Ayacucho Quechua the future tense marker is identical to the narrative past tense marker *sqa* in forms with a 1st person subject and 2nd person object. According to Parker (1969a) the similarity between these two forms has emerged from an accidental correspondence between several allomorphs; future tense *sqa* would be derived from SA-QA, while narrative past *sqa,* would consist of S-QA.

Fission

Candidates for an analysis in terms of fission are forms like *wa-ncis* and *wa-sun(cis).* The suffix(es) *ncis* and *sun(cis)* refer to a first person plural inclusive (1+2), *wa* to a first person object, and *wa-ncis* and *wa-sun(cis)* to a third person actor and a first person plural inclusive (1+2) object. Therefore, we may conclude that 1st person is expressed twice, both in *wa* and in *ncis* or *suncis*. However, again, such analysis needs an extra principle to account for the direction of agentivity, and, instead, an analysis in which *suncis* has two different meanings dependent on the context is also possible.

---

la segunda persona objeto y el pasado tiene un orden inverso, registrándose ***pusa-rqa-su-nki***, etc.") However, according to Lefebvre and Muysken (1988) *-su-* is found before the tense marker. These different data may stem from stylistic or regional variation.

6.2.2.3 Isomorphy

According to the Isomorphy Principle the following order is preferred cross-linguistically (cf. section 2.1.3.2):

Stem >> Valency >> Voice >> NumObjAgr >> PersObjAgr >> GenObjAgr >> Aspect >> Tense >> Mood >> NumSubAgr >> PersSubAgr >> GenSubAgr.

The basic Cuzco Quechua order of the affixes that I take into consideration is:[164]

Verb-(Der)- PersObjAgr- Tense- SubAgr- NumSub/ObjAgr.

In two respects Cuzco affix order deviates from this order. First of all, not all affix sequences comply to this order. In 6.2.2.2 I discussed morphemes in which object and subject agreement suffixes were fused. These fused morphemes violate the Isomorphy Principle when there is a tense affix, since a fused morpheme can obviously not appear both before and after this tense affix (cf. the examples in Table 6.3 above).

Secondly, the category of number in Cuzco Quechua may refer to the number of the object. This means that this affix refers to the meaning of a non-adjacent affix. Such an order deviates from the ideal order above.

6.2.2.4 Other Principles

Depending on the kind of analysis adopted, we may assume that an animateness hierarchy is operative in Cuzco Quechua. This hierarchy may determine how plural affixes are interpreted, and possibly what the direction of agentivity is, what kind of category combinations appear in fused form, and what order of affixes is allowed. In section 6.3.3.2 I examine a proposal by Lakämper & Wunderlich (1998) which describes this kind of hierarchy.

When analysing Quechua in a model where lexical items are mutually independent atomic items, some regularities are missed. Instead, when we assume that in interpretation and composition of words paradigmatic relations between words play a role, we can capture regularities that are otherwise missed. For instance, if we mechanically analysed *wa-ncis*, we would arrive at a reflexive meaning, 1+2FUT→ 1. However, since reflexivity is already expressed in another part of Quechua morphology we adjust the interpretation and arrive at the actual meaning, 3→ 1+2. Here it is not the composition of the parts which determines the full meaning, but the relation between this form and other forms in Quechua, which is a paradigmatic relation.

Other regularities that are only paradigmatic are: the partial both form- and meaning correspondence between 1+2, *-ncis*, and the plural marker of the 2nd person, *cis*; the correspondence between *ki* in *yki*, and *ki* in *nki*, and so on. Such paradigmatic relations correspond to the vague form-meaning correspondences between 'wh-words', in English. Though *wh* does not mean anything in itself, there are associations between both form (*wh*) and meaning (questioning) in English. These associations do not have morphemic status, though they have both historical and probably also psychological reality.

[164] 'Basic' in the sense of 'most simple order' from which other orders can be derived by some additional principles.

6.2.3 Cuzco versus Ayacucho Quechua

In the discussion above, I have already outlined the differences between Cuzco and Ayacucho. Now I will summarise these.

Ayacucho Quechua has the same affix in the singular and plural 1st person subject agreement, cf. *riku-ni* and *riku-ni-ku.* Cuzco Quechua has *riku-ni* versus *riku-y-ku.* For the development of Bolivian and Argentinean Quechua this had major consequences (cf. next section). Ayacucho Quechua has *riku-su-rqa-nki*, while Cuzco Quechua often has *riku-rqa-su-nki*. This difference will also play a role in other Quechua varieties. Finally, Ayacucho makes less use of the exclusive plural *ku*-affix. In Ayacucho this affix does not pluralise 3rd person subjects when there is also an object (cf. Parker 1969a: 28), while Cuzco Quechua does not have such a restriction.

6.3 Southern Quechua

In this section I discuss the changes in what I call Southern Quechua, that is, Bolivian and Argentinean Quechua. Because these changes are highly comparable I present them in the same section.

6.3.1 Bolivian Quechua

Bolivian Quechua is based on Cuzco Quechua. It has roughly the same structure and expresses the same notions in the same order of affixes:

Verb - Der - Obj - Tense - Sub - Num.

However, there have been some minor changes which, nevertheless, have had wide repercussions for Bolivian Quechua inflection.

The Bolivian Quechua data given here are based on Van de Kerke (1996a, 1996b), Lakämper & Wunderlich (1998) and Muysken (fieldwork data). In Table 6.6 on next page I have shaded the cells where Bolivian Quechua (i.e. Cochabamba Quechua) differs from Cuzco Quechua, because of person-number fusion (cf. below), and I circumlined the cells with bold where another change took place, i.e. reanalysis of *su*. The data are from Tarata, a small town near Cochabamba (Van de Kerke 1996a). In Table 6.6 I also provide data -if different- from Quechua varieties spoken in Potosí (P) (cf. Lakämper & Wunderlich 1998: 139), Norte de Potosí (N) (Plaza 1987, in Van de Kerke 1996a: 132) and Charazani north of La Paz, near the Peruvian border (C) (Muysken, fieldwork data). I added *nki* in 3.sub → 2.pl.obj. between brackets, because according to Bills, Troike en Vallejo (1969) this suffix would be found in Bolivian Quechua (Adelaar, pers.comm.).

In several aspects Bolivian Quechua has remained similar to Cuzco Quechua. It still has four tenses: present, simple past, narrative past and future. Because future 1PL.EXCL.SUB and OBJ forms have changed these are now also similar to their narrative past counterpart.

In Cuzco Quechua forms with a 2nd person object and a 3rd person subject were similar in the present and future tense. In Cochabamba Bolivian Quechua, these are only similar with 2nd person **plural** objects, while there is some variation in the other Bolivian varieties. Forms with a future 2nd person subject are still identical to present tense forms.

Basically, Bolivian Quechua agreement is similar to Cuzco Quechua agreement. However, two small changes occurred which had far-reaching consequences; 1PL.EXCL *y*-

ku and 3PL *n-ku* fused to *yku* and *nku*, and *su* received a more independent status. I will analyse these changes together with parallel changes in Argentinean in 6.3.3.2.

Table 6.6 Bolivian Quechua verb inflection

Present tense

	1sg obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	-yki N:(su)-yki	*	*	-yki-cis N:(su)-yki-cis	-ni
2sg	-wa-nki	*	*	-wa-yku	*	-nki
3sg	-wa-n	-sunki	-wa-ncis	-wa-yku	-su-nki-cis	-n
1pl.inc	*	*	*	*	*	-ncis
1pl.exc	*	-yku NP:-su-yku C:-yki-ku	*	*	-yku PC:yki-cis N: su-yku-cis	-yku
2pl	-wa-nki-cis	*	*	-wa-yku	*	-nki-cis
3pl	-wa-nku	-su-nku	-wa-ncis	-wa-yku	-su-nki-cis N: su-nku-cis	-nku

Past tense (with *rqa*)

	1sg obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	-rqa-yki	*	*	-rqa-yki-cis	-rqa-ni
2sg	-wa-rqa-nki	*	*	-wa-rqa-yku	*	-rqa-nki
3sg	-wa-rqa	-su-rqa C:-rqa-sunki	-wa-rqa-ncis C:rqa-wanchik	-wa-rqa-yku	-su-rqa-(nki)-cis	-rqa
1p.inc	*	*	*	*	*	-rqa-ncis
1p.exc	*	-rqa-yku	*	*	-rqa-yku	-rqa-yku
2pl	-wa-rqa-nki-cis	*	*	-wa-rqa-yku	*	-rqa-nki-cis
3pl	-wa-rqa-nku	-su-rqa-nku	-wa-rqa-ncis	-wa-rqa-yku	-su-rqa-(nki)-cis	-rqa-nku

Future tense

	1sg obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	-sqa-yki	*	*	-sqa-yki-cis	-saq
2sg	-wa-nki	*	*	-wa-sqa-yku	*	-nki
3sg	-wa-n-qa	-su-nqa C:-sunki	-wa-suncis	-wa-sqa-yku	-su-nki-cis	-n-qa
1p.inc	*	*	*	*	*	-suncis
1p.exc	*	-sqa-yku	*	*	-sqa-yku	-sqa-yku
2pl	-wa-nki-cis	*	*	-wa-sqa-yku	*	-nki-cis
3pl	-wa-nqa-nku	-su-nqa-nku	-wa-suncis	-wa-sqa-yku	-su-nki-cis	-nqa-nku

6.3.2 Argentinean Quechua

In Table 6.7 on Argentinean Quechua the forms that differ from Cuzco Quechua and are similar to Cochabamba Quechua are lightly shaded, when *y-ku* or *n-ku* fusion is involved, and are outlined boldly when *su*-uniformity is involved. The forms that also differ structurally from Bolivian Quechua are more heavily shaded, and circumlined when *su*-

extension is involved. Data are based on Adelaar (1994), Alderetes (1994), Bravo (1956) and Lakämper and Wunderlich (1998).

Table 6.7 Argentinean Quechua verb inflection

Present tense

	1sg.obj[165]	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	-su-ni/ -yki[166]	*	*	-yki-cis	-ni
2sg	-a-nki	*	*	-a-yku	*	-nki
3sg	-a-n	-su-n	-a-ncis	-a-yku	-su-nki-cis	-n
1pl.inc	*	*	*	*	*	-ncis
1pl.exc	*	-su-yku	*	*	-yki-cis	-yku
2pl	-a-nki-cis	*	*	-a-yku	*	-nki-cis
3pl	-a-nku	-su-nku	-a-ncis	-a-yku	-su-nki-cis	-nku

Past tense

	1sg.obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	-su-ra-ni/ -ra-yki	*	*	-ra-yki-cis	-ra-ni
2sg	-a-ra-nki	*	*	-a-ra-yku	*	-ra-nki
3sg	-a-ra	-su-ra	-a-ra-ncis	-a-ra-yku	-su-ra-nki-cis	-ra
1pl.inc	*	*	*	*	*	-ra-ncis
1pl.exc	*	-su-ra-yku	*	*	-ra-yki-cis	-ra-yku
2pl	-a-ra-nki-cis	*	*	-a-ra-yku	*	-ra-nki-cis
3pl	-a-ra-nku	-su-ra-nku	-a-ra-ncis	-a-ra-yku	-su-ra-nki-cis	-ra-nku

Future tense

	1sg.obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	-su-saq/ -sqa-yki	*	*	-sqa-yki-cis	-saq
2sg	-a-nki	*	*	-a-saq-ku	*	-nki
3sg	-a-nqa	-su-nqa	-a-suncis	-a-saq-ku	-su-nki-cis	-nqa
1pl.inc	*	*	*	*	*	-suncis
1pl.exc	*	-su-saq-ku	*	*	-su-saq-ku	-saq-ku
2pl	-a-nki-cis	*	*	-a-saq-ku	*	-nki-cis
3pl	-a-nqa-nku	-su-nqa-nku	-a-suncis	-a-saq-ku	-su-nki-cis	-nqa-nku

As in Cuzco and Bolivian Quechua, there are three tense paradigms: present, past and future, with two past tense sub-paradigms. Allomorphy and homonymy is also roughly similar to Bolivian Quechua. Minor differences are that in Argentinean Quechua only singular 1SUB.→2OBJ forms, *sqa-yki,* are identical in the narrative past and the future.

[165] In the literature the 1OBJ affixes are given as -a-. This results from a rule that deletes *w* between vowels, in combination with the condition on stems and derivational suffixes that they must end on a vowel.

[166] According to Adelaar (pers.comm.) the 1SG→2SG forms with *su* are more common, and other forms possibly hypercorrections by the grammarians.

Furthermore, in Argentinean Quechua forms with a 2nd person object and a 3rd person subject are only similar in present and future tense with **plural** objects, cf. *su-nki-cis*, in the present and future tense paradigm.

As in Bolivian Quechua, Argentinean Quechua inflection is still based on the same underlying system of the order:

Verb - Obj - Tense - Sub - Num.

As in Bolivian Quechua, the fusion of person and number affixes, and the slightly different meaning of the *-su-* affix in Argentinean Quechua have caused the whole paradigmatic structure to be rearranged.

6.3.3 Analysis

6.3.3.1 Economy

The categories expressed in Bolivian and Argentinean Quechua are, as in Cuzco Quechua, tense, subject and object agreement, and number. The values these categories can take are also still the same. In the same way, Economy holds for number agreement in Cuzco Quechua. When both the subject and the object agreement are plural, this is only expressed once.

Economy also plays a role in the category of tense which basically remains the same in Bolivian and Argentinean Quechua as well as in Cuzco Quechua. In several forms the future tense is similar to the present tense, while some future forms are, by accident, also similar to the narrative past. There are some slight differences in the exact forms that are similar across tense. This is, however, not an independent change towards more Economy, but is a side-effect of the other changes which I will now discuss.

6.3.3.2 Transparency

Transparency has a different emphasis in Bolivian and Argentinean Quechua. It has been changed significantly through two broad developments that affected the whole inflectional system of Southern Quechua. These are, firstly, the fusion of the *ku* number marker with the person markers, and secondly, the greater transparency of the second person object suffix *su*.

Fusion of person and number

In Cuzco and Ayacucho Quechua, the number marker *ku* is a separate suffix placed after the person marker affixes. It can refer to the plurality of the subject or the object, irrespective of whether the subject or object markers are adjacent to this number marker (cf. 6.2.1.2).

In Bolivian and Argentinean Quechua the sequences *n-ku* and *y-ku* have been reinterpreted as inseparable affixes, and the affix *ku* itself has largely disappeared. In other words, *ku* has fused with the first person plural subject marker *y* and with the third person subject marker *n*, resulting in two new suffixes *yku* and *nku*. As first noted by Van de Kerke (1996a), it can no longer appear without these subject markers. The rationale behind this reinterpretation may be a form of Isomorphy, which demands that affixes only refer to other affixes that are adjacent. When Bolivian speakers had concluded that *-ku* always referred to the adjacent affix, it was only a small step to reanalyse these two affixes as one fused affix. An extra motivation behind this reanalysis may be the structure

of Aymara, which was spoken by many of the new Quechua learners. In Aymara there are only subject and object agreement slots and no number slot in the inflectional paradigm. In some cells in the future tense paradigm of Argentinean Quechua *-ku* is, however, still found without adjacent *-n* or *-y*. Perhaps *-ku* in Argentinean Quechua may only be used in future tense, which implies that with respect to plural number and the reanalysis of *y-ku* and *n-ku* Argentinean Quechua is a little hybrid. Another possibility suggested by Van de Kerke (pers.comm.) is that *-ku* in Argentinean is also fused with *saq* into *saqku*. This would explain the distribution of *-ku* without *-n* or *-y*, although the assumption of *saqku* as a fused affix would meet with the same criticism as the assumption of *sunki* as a fused affix in Cuzco Quechua. That is, such heavy affixes have a quite untypical form in Quechua morphology.

This fusion has no immediate consequences in the present tense intransitive paradigm, where *ku* in Cuzco Quechua is used for pluralising its **adjacent** first and third person subject suffixes. In the transitive paradigm and in the past and future tenses, however, problems arise. In those cells *ku* was used to pluralise: the **non-adjacent** 1st person object markers; the subject markers which are **non-adjacent** because of intervention of tense-affixes; and the first and third person subject markers, which are expressed in the fused forms *yki*, and *sunki* (cf. Table 6.6, where I shaded these problematic cases).

These problems led to different outcomes in different varieties of Bolivian Quechua. In the 1PL.EXCL.SUB-> 2SG/PL.OBJ forms *yki-ku* was no longer possible because *ku* no longer existed. In Potosí and Charazani, in the present 1PL.EXCL → 2PL form, *yki-ku* has been replaced by *yki-cis*. This form expresses plurality of the object instead of the subject. However, since we still find *yki-ku* in Charazani Quechua, this variety may be analysed as still having a separate *ku*-affix, which has stronger restrictions of occurrence than in Cuzco Quechua. Muysken (pers.comm.) suggests that *-ku* is only disallowed when adjacent to the 2nd person affix, *nki*. Although this still leaves the past tense form *rqa-yku* instead of *rqa-yki-ku* unexplained, such a restriction represents the halfway solution between free distribution of *ku*, and fusion of *ku* with *y* and *n*. This looser bond of *y* and *ku* in north Bolivia may be due to more influence from and convergence towards nearby Cuzco Quechua. In other Bolivian varieties *yki-ku* has been replaced consistently by (*su*)-*yku*.

In some cases categories are omitted for the sake of other apparently more important categories. In forms with a first person plural exclusive object, the plurality of this object is expressed at the expense of the expression of the person and number of the subject. In the forms where a tense marker originally was fused with a subject marker, and where *ku* only added plurality, as in 3PL→3SG.PAST *rqa-ku*, the plural marker is replaced by its corresponding new markers *yku* and *nku*. The seemingly 'innocent' fusion of *y-ku* and *n-ku* has had quite far-reaching repercussions for the inflectional system. There is more homonymy between some forms (cf. the shaded column under 1PL.EXC), but also more fusion (of *-y-/-n-* and *ku*) and more fission (as in *wa-rqa-yku*, where first person is expressed twice, in *wa* and in *yku*).[167]

In most cases the fusion of *ku* in Argentinean and Cochabamba Quechua led to similar problems and similar solutions. In 1PL.EXC→2PL forms, the expression of the plurality of the first person in the present tense is apparently less important than the expression of the

[167] However, these instances of fission can also be analysed as cases of allomorphy.

plurality of the second person, resulting in *yki-cis,* as in Potosí and Charazani. However, the future tense paradigm, where we find forms ending with *-ku* (see above), is different from that which is found in Cochabamba Quechua.

The fusion of *ku* with subject affixes and perhaps even tense affixes (in Argentinean Quechua) led to new forms, where other categories were omitted. Perhaps the choice of categories that were omitted not only depended on a semantic prominence hierarchy but also on paradigmatic effects (Van de Kerke, pers.comm.). That is, new forms in Bolivian and Argentinean could be built in analogy with other forms in the paradigm, and not only on the basis of the computation of form-meaning relations. I discuss such paradigmatic forces in Southern Quechua in section 6.3.3.4.

The effects of this fusion in Southern Quechua with respect to Transparency are not straightforward. First of all, in Argentinean Quechua, and especially in Bolivian Quechua, there is obviously more fusion, since *y-ku* and *n-ku* have fused. This introduces two new affixes. In forms with a first person plural object, there is also more fission, since 1st person is marked twice in these forms. In these forms there is also more homonymy since the person and number of the subject are no longer expressed. Because of this change Bolivian Quechua has less homonymy than Cuzco Quechua, since a distinction has appeared between plural and singular of the 1st person object when the subject is third plural.

Reinterpretation of *-su-*

As I discussed in section 6.2.2.2, in Quechua II *su*, or *sunki*, is hard to analyse as a regular affix with consistent meaning. While in Ayacucho Quechua *su* appears as a separate affix, in Cuzco Quechua *su* seldom occurs by itself.

In Bolivian Quechua *sunki* has been (re)-interpreted as a combination of two separable suffixes *su* and *nki*. In contrast with earlier Quechua, *su* tends to be interpreted as a general 2OBJ. marker. In Charazani, possibly owing to its close proximity to Cuzco Quechua, there are still several instances where *sunki* is not split or reanalysed. However, in Cochabamba Quechua, especially in 3SUB→2OBJ past and future tense forms, *su* has become the 2OBJ marker. In Potosí and Norte de Potosí *su* is also used as 2OBJ marker in some forms with a **first** person subject.

In Argentina this development has gone even further; the *su*-affix has been generalised to most 2OBJ forms, like 1→2, *su-ni* and *su-yku*, though less in 2PL.OBJ forms, e.g. *su-ra-nki-cis,* 3→ 2PL.PAST. In Bolivian Quechua the more consistent form, *su-rqa-cis,* 3→ 2PL.PAST, using *su* as the 2nd person object affix is also found.

This change towards a more uniform expression of 2nd person leads to less fusion in Bolivian Quechua, under the assumption that *sunki* was a fused form in Cuzco Quechua. In Argentina even more non-transparent forms, i.e. 1→2 forms*,* are replaced by transparent forms, composed with *su* as a second person object.

Several factors may have played a role in the reanalysis of *su*. The reinterpretation may have been triggered by the fusion of *-n-/-y-* and *ku*, which prevented the use of the 3PL→ 2SG Cuzco Quechua form *sunki-ku*. This form could not be replaced by *sunki-nku*, because *nku* counts as a subject marker. Since *sunki* is already in subject position, *sunki-nku* would not be possible. The solution in Bolivian Quechua for the expression of 3PL→ 2SG may have been to reinterpret *sunki*, and to put *su* in the object position, while omitting *nki* in favour of the plural third subject marker *nku*. This may have resulted in

the replacement of the Cuzco form *sunki-ku* for *su-nku*. Consequently, this reanalysis may have spread to other cells of the paradigm.

This analysis, however, cannot explain the direction of *su*-spread. In Bolivian Quechua *su* spread especially in the past and future tense, while in Argentinean Quechua it spread mainly to 1SUB → 2SG.OBJ forms.

Moreover, in Cajamarca Quechua, a Quechua IIa variety spoken in north Peru, a similar spread of *su* took place without reinterpretation of a *ku*-plural marker, which in fact does not exist in Cajamarca. The Cajamarca Quechua paradigm may have played a role in reanalysing *su* in the south as well, because there are indications that Quechua speakers from the Cajamarca area migrated to the south after the Spanish Conquest (cf. Adelaar 1994: 46). In Cajamarca Quechua we find forms like, *rika-shu-rqa-q,* 1→2PAST and *rika-shu-nqa,* 3→2FUT (Quesada 1976: 126). Moreover, just as in Bolivian Quechua, in Cajamarca Quechua the diffusion of *su* also took place primarily in the non-present tenses (cf. Adelaar 1994: 39).

When assuming spread from another Quechua variety, without the *ku*-marker, we still do not know why *su* changed the way it did in Cajamarca in the first place. Perhaps this pattern is caused by the possibility in the present tense of using *sunki*, while in the past and future tense, the tense marker separates the two parts into *su* and *nki*. This separation may have helped the reanalysis of *su* especially in the past and future tense. This motivation may have worked in Cajamarca and then been diffused to the south, or perhaps this reanalysis was worked out independently in several Quechua varieties.

The influence of Ayacucho Quechua in the south possibly played a role in separating *su* and *nki*. The same influence may have been exerted over Cajamarca Quechua, since this Quechua IIa variety probably does not stem from Cuzco Quechua, which has the strongest tendency to fuse *su* and *nki*. Finally, the major substrate language in the south, Aymara may also be important in the spread of *su*, since Aymara has an agreement system with extensive 2nd person object marking (cf. Cerron-Pálomino 1994: 105). This last explanation, however, cannot explain why *su*, 2OBJ is also found in Cajamarca, where there is no Aymara substrate. Moreover, in Aymara the object agreement affixes are usually fused affixes.

Lakämper and Wunderlich (1998) analyse the changes with respect to *su* in Southern Quechua IIc varieties with the help of a formal constraint and three stages:

1) The so-called Object-Subject-Constraint is active. This constraint says that objects may only be separately marked if the person of the object is higher on the person hierarchy than the subject. If the person is lower there may only be a fused form or no form at all. The person hierarchy is in Quechua 1>2>3 (cf. also Lefebvre & Dubuisson 1977). In this phase the asymmetry between the **fused** form 1→2 *yki*, and the **non-fused** forms 2->1, *wa-nki*, 3->1 *wa-n*, and 3->2 *su-nki* is explained by this constraint. This is the stage of the older and more conservative Quechua varieties, like Q1 varieties and Ayacucho Quechua.
2) *su* is no longer a separate morpheme, because it has been fused with *nki* into *sunki*. Therefore there is no 'danger' anymore that 1->2 would be expressed as *su-ni*, because *su* simply does not exist anymore. In this phase the OSC is irrelevant, because it fulfils no new function. According to Lakämper and Wunderlich (1998) Cuzco Quechua is in this stage.

3) In the next stage *sunki* has been re-interpreted as *su-nki* but the OSC has not returned with this reinterpretation. Therefore, forms like *su-ni* and *su-yku* have become possible. Bolivian Quechua is in this phase, and Argentinean Quechua is one step further than Bolivian because it has implemented this possibility in more contexts.

This explanation uses the OSC to explain why *su* only spreads in varieties based on Cuzco Quechua, and it also explains some other 2nd person assymmetries in nominal inflection. However, this constraint has no psychological or communicative plausibility. Moreover, it cannot explain why in Cajamarca Quechua, which is **not** based on Cuzco Quechua, *su-ni* is also possible. In addition, this analysis assumes that Bolivian and Argentinean Quechua are only based on Cuzco Quechua, while these varieties are also influenced by other Quechua varieties. Finally, even in Cuzco Quechua, *su* and *nki* are not always a unit (cf. Lefebvre & Muysken 1988).

6.3.3.3 Isomorphy

These two broad developments in Southern Quechua have had some effects on Isomorphy as well. As I discussed in 6.2.2.3, Cuzco Quechua deviates from Isomorphy in two ways, by having fused subject/object affixes, and by allowing the number affix to refer to the object position.

In Southern Quechua *sunki* is split, and *yki* is found in fewer contexts. This results in an affix order that complies better with the Isomorphy Principle; the object and subject agreement positions are more consistently filled with appropriate affixes. The fusion of *yku* and *nku* may be described as effects of strong locality demands. In other words, Isomorphy demands that affixes may only refer to adjacent affixes. At first sight Isomorphy is better complied with. However, these fused affixes are still used to pluralise non-adjacent affixes, and the initial strong locality demand is lost. However, Lefebvre & Dubuisson (1977: 69) write: "The Bolivian dialect follows the rule of the classical dialect (older Cuzco Quechua) in favouring number agreement with the subject instead of the object."[168]

6.3.3.4 Other principles

Some phenomena in Cuzco and Ayacucho Quechua may be manifestations of an animateness or person hierarchy. This is also plausible for Southern Quechua. Although I do not fully adopt Lakämper & Wunderlich's (1998) analysis, their observations that the category of person behaves differently depending on whether it is 1st, 2nd or 3rd person remains valid. In addition, in the changes which were induced by the person-number fusion, 2nd and 3rd person categories are more easily dropped than 1st person categories, which is also an indication that there is a hierarchy where 1st person is ranked above 2nd and 3rd person. However, the selection of forms like *wa-rqa-yku*, above e.g. *wa-rqa-nki* may also be explained by paradigmatic motivations to which I now turn.

In Cuzco Quechua there are forms like *wa+ncis* whose interpretation is motivated by paradigmatic relations as discussed in section 6.2.2.4. As Van de Kerke (pers.comm.) notes, several changes in Southern Quechua may be motivated by such relations. First of all, the construction of *wa-(rqa)-yku* is facilitated by the following (paradigmatic)

[168] "Le dialecte Bolivien suit la règle du dialecte classique en favorisant l'accord en nombre avec le sujet plutôt qu'avec l'object."

analogy: the (PAST) 1PL.INCL.SUB in Bolivian Quechua is (*rqa)-ncis*. The (PAST) 1PL.EXCL.SUB is (*rqa)-yku*. Now, the irregular (PAST) 1PL.INCL.**OBJ** is *wa-*(*rqa)-ncis*. When taking the analogy between these three forms into account, the form *wa-*(*rqa)-yku* for the (PAST) 1PL.**EXCL**.OBJ is not surprising. Similarly, the future 1PL.**EXCL**.OBJ, *wa-sqa-yku* in Bolivian Quechua (Herrero 1978: 324) is composed on the basis of the 1PL.EXCL.SUB.[169] In Argentinean Quechua the 1PL.INCL.SUB is *-suncis*, and the 1PL.EXCL.SUB is *saq+ku*.[170] Thus, the irregular (FUT) 1PL.INCL.**OBJ** is *wa-suncis*, and the (FUT) 1PL.**EXCL**.OBJ is *wa-saq+ku*.

Another example of paradigmatic effects is the absence of 3→2 forms ending on *su-n* in varieties where the 1PL.FUT may also end on *sun*. This is a case where a homonymic form is **avoided** because a phonologically similar form already exists elsewhere in the paradigm. In Argentinean Quechua there is a 3→2 *su-n* form, and in this variety Bravo (1956: 154ff.) indeed does not mention a 1PL.FUT *sun* form.

These paradigmatic inflectional changes differ from other changes that could be motivated on the basis of analogy. For instance, the replacement of *yki*, 1→2 by *su-ni* in Argentinean Quechua is an analogous extension on the basis of other forms with *su*. However, the difference with the examples above is that in those forms an irregular form is composed on the basis of another irregular form without a straightforward modification of a feature specification of a particular morpheme, while in the latter example, only a feature specification has changed: the conditioning factors of *su* were minus 1st person subject, which have been removed.

6.3.4 Conclusion

Bolivian and Argentinean Quechua differ from Cuzco Quechua in the fusion of *ku* with *-y-* and *-n-*. Furthermore in the history of Quechua IIc varieties there have been some changes in the status of *su*. In Ayacucho it was an independent suffix, though with a peculiar meaning, in Cuzco Quechua it does not occur as an independent affix, while in Bolivia and to an even larger extent in Argentina *su* has been reinterpreted as a general 2nd person object marker.

With respect to the various Principles, we conclude the following. In Bolivian Quechua there is both more fusion (*y+ku* and *n+ku*) and less fusion (*su - nki*). There is more homonymy, especially in 1PL.OBJ forms, and more fission, in these same forms. The order of affixes complies better with Isomorphy than in Cuzco Quechua, though not perfectly.

In Argentinean Quechua there is also more homonymy and fission due to the fusion of *y-ku* and *n-ku*. In one aspect, Argentinean Quechua is more transparent than Bolivian Quechua, that is, the fused *sunki* and *yki* affixes are more rigorously avoided, and replaced by more transparent affixes. Thus the order of affixes in Argentinean Quechua is more closely linked to Isomorphy.

In conclusion, it depends on how we rank the loss of fusion, in comparison with an increase of fission, and an increase of Isomorphy. However, when no factor is ranked

[169] Adelaar (pers.comm.) notes that instead of several analogical extensions we may also assume only one analogical extension in the present tense, while deriving the other forms from this present tense form.

[170] In section 6.3.3.2 I discuss whether *saq* and *ku* are one or two affixes.

higher than another, we see that Argentinean Quechua displays a little more Transparency than Bolivian Quechua which has changed only slightly with respect to Transparency. Both varieties conform a little better to the Isomorphy Principle. Therefore, Argentinean Quechua has moved a little closer towards a 'Type 2 language' than Bolivian Quechua.

Van de Kerke (1996a: 130), however, draws a different conclusion:

> "We have seen that Cuzco Quechua has a very transparent Agr/Tense sytem. Apart from the non-local character of the subject->object transitions *-yki* and *-sunki* and the non-local interpretation of the plural markers, it complies with the Mirror Principle in realising a good match between the order of morphemes and the morpho-syntactic categories expressed. However, this ideal transparency has become opaque by a minor reinterpretation of first and third plural marking in Bolivian Quechua, which not only led to a great number of underspecified and doubly specified surface realisations, but even to the realisation of subject markers as pluralisers in the case of *-yku* as in *-wa-yku* [unspecified sub-> 1Plob]."

Though Van de Kerke (1996a, b) acknowledges the non-ideal character of Cuzco Quechua's non-locality and fused morphemes, he conceives the homonymy and fission, or, as he calls it, underspecification and double specification, as more threatening to ideal transparency. In addition, he does not take into account the somewhat smoother affix order of Obj-Tense-Sub in Bolivian Quechua, which results from the more transparent *su* affix in Bolivian.

This different view may be related to the different question posed. Van de Kerke (1996a, b) uses the Bolivian data to examine whether Baker's (1985) Mirror Principle holds. Since the Bolivian data are more problematic for the Mirror Principle than the Cuzco data, Bolivian Quechua may be called less transparent. My notion of transparency and isomorphy is, however, a different one (cf. section 2.1), in which e.g. homonymy is not a more severe violation of Transparency than fusion.

Lakämper and Wunderlich (1998: 147) say about Quechua complexity:

> "So one may argue that dialects like that of Ancash and Ayacucho are defective from the very beginning: OSC [Object-Subject Constraint, cf. above, WK] restricts the generative capacity of the individual morphemes but forces complex morphemes that encode information about both object and subject. Only when we come to the post-Cuzco stages (like Potosí or Santiago del Estero), in which the individual morpheme *-su* for 2person is reinvented, has this kind of deficiency been overcome and an affix-oriented system is produced. However, there can only be small changes, and the new system has to work with the affix material inherited from the former stages. As we have seen, the potentially symmetric system that emerges in the most recent stages of Quechua is not ideal either."

In this last sentence they refer to the relatively large number of affixes, and allomorphy, in 'post-Cuzco' varieties. In contrast with Van de Kerke, Lakämper and Wunderlich suggest in this quote that Quechua varieties like Cuzco and Ayacucho Quechua are 'deficient'; they need 'complex morphemes', that is, fused morphemes, to comply with the OSC. In 'post-Cuzco' varieties, this deficiency is essentially removed, were it not that Bolivian and Argentinean have to 'work with the affix material inherited from the former stages'.

Although I do not use the OSC, this concurs roughly with my view; in 'pre-Cuzco' varieties there is quite some fusion and non-isomorphy, which is absent in Bolivia and Argentina. In these latter varieties, instead, new complications have arisen.

Lakämper and Wunderlich (1998: 146) give a somewhat simplified picture of the violation of Transparency by these new complications. They only count the number of allomorphs, and conclude that the reduction in fusion in pre-Cuzco varieties is counterbalanced by the increase in allomorphy. However, when taking all violations of Transparency, Economy, and especially Isomorphy into account in Quechua IIc varieties, we have the impression that Bolivian and certainly Argentinean Quechua have been changed in the direction of a Type 2 language.

6.4 Ecuadorian Quechua

6.4.1 Data

The data on Ecuadorian Quechua come from Cole (1982) and Muysken (1977, 1999, 2000). Cole's grammar is on Imbabura Quechua, while Muysken's (1977) data are from more central dialects. These varieties differ with respect to plural marking on verbs, Imbabura having no 3.PL.SUB marking on verbs, while the central dialects have a plural marker for the third person subject, which I marked with parentheses in Table 6.8.

Table 6.8 Ecuadorian Quechua verb inflection

Present tense

	1sg.obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	*	*	*	*	-ni
2sg	-wa-ngi	*	*	*	*	-ngi
3sg	-wa-n	*	*	*	*	-n
1pl.inc	*	*	*	*	*	-nci
1pl.exc	*	*	*	*	*	-nci
2pl	-wa-ngi-ci	*	*	*	*	-ngi-ci
3pl	-wa-n-(kuna)	*	*	*	*	-n-(kuna)

Past tense

	1sg.obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	*	*	*	*	-rka-ni
2sg	-wa-rka-ngi	*	*	*	*	-rka-ngi
3sg	-wa-rka	*	*	*	*	-rka
1pl.inc	*	*	*	*	*	-rka-nci
1pl.exc	*	*	*	*	*	-rka-nci
2pl	-wa-rka-ngi-ci	*	*	*	*	-rka-ngi-ci
3pl	-wa-rka-(kuna)	*	*	*	*	-rka-(kuna)

Future tense

	1sg.obj	2sg	1pl.inc	1pl.exc	2pl	3/ no obj.
1sg	*	*	*	*	*	-sha
2sg	-wa-ngi	*	*	*	*	-ngi
3sg	-wa-nga	*	*	*	*	-nga
1pl.inc	*	*	*	*	*	-sun
1pl.exc	*	*	*	*	*	-sun
2pl	-wa-ngi-ci	*	*	*	*	-ngi-ci
3pl	-wa-nga-(kuna)	*	*	*	*	-nga-(kuna)

6.4.2 Analysis

6.4.2.1 Economy

All categories that exist in Cuzco Quechua also exist in Ecuadorian Quechua. However, within these categories, some notions are no longer expressed. First person objects are marked only in the singular. Object agreement with a second person is no longer marked at all. The reason for the loss of these notions does not lie in the difficulty of these notions themselves, but in the complex way they were expressed. That is, the increase in Economy is a consequence of that in Transparency or Isomorphy. If, instead, we surmised that Economy rose independently from Transparency, we could not explain how 1SG.OBJ forms were retained.

In many varieties of modern Ecuadorian Quechua *wa*, the 1OBJ marker is disappearing. This would entail that the whole category of object agreement would be lost.

A second increase in Economy lies in the loss of the exclusive plural marker. As a result, the inclusive 1st person plural marker now expresses the first person exclusive plural as well. In central Ecuadorian Quechua, there is a separate marker for the third person, *kuna,* which optionally replaces *ku.*

6.4.2.2 Transparency

In Ecuadorian Quechua there are no forms like *yki* and *sunki*, common in other varieties. In Cuzco Quechua these are port-manteau morphemes expressing subject and object properties. There are no attestations of *sunki* after the introduction of Quechua into Ecuador. The form *yki* has been attested in earlier sources, but is not longer observed after 1900 (cf. Muysken 1999).

We argued above that *yki* and *sunki* are both fused forms in Cuzco Quechua. In comparison with Cuzco Quechua Transparency has increased in Ecuadorian Quechua, through the loss of these fused forms. When we compare Ecuadorian Quechua with other historically related Quechua II varieties, the difference lies not in the loss of fusion, but in the loss of allomorphy or fission, present in the *su - nki* combination. In forms like Ayacucho *riku-su-rqa-nki-cik,* see-'SU'-PAST -2-PL.INCL, 'he saw you all', *su-nki* is either a fissioned form in which 2nd person is expressed twice, or *nki* is an allomorph of a 3rd person affix. Another possibility is that the latter form is non-isomorphic, in which the 2nd person **object** is expressed in subject position. No matter how we analyse *su-nki*, the loss of this form means the promotion of Transparency. The loss of these two non-transparent forms led to the partial increase in Economy discussed above.

6.4.2.3 Isomorphy

In Cuzco Quechua and other Quechua II varieties, plural markers can refer either to the subject or the object, irrespective of the form and position of the pluralised affix in the word. In Ecuadorian Quechua, however, the plural marker *cis* can only refer to an adjacent affix, and not to the non-adjacent object marker *wa*. This condition blocks the expression of plural objects, and leads to more Economy as discussed above.

Due to this latter condition, and the loss of non-transparent forms, Ecuadorian Quechua inflection is much more isomorphic than all other Quechua varieties. The following order has no exceptions in Ecuadorian Quechua:

Verb - Der - Obj - Tense - Sub - Num(Sub).

6.4.2.4 Conclusion

All changes in Ecuadorian Quechua are in the direction of more Economy, Transparency, and Isomorphy. Non-transparent forms disappeared, complex orders are blocked, and fewer semantic notions are expressed. In sharp contrast with Bolivian and Argentinean Quechua, there are no changes in the other direction.

6.5 Linguistic and social changes in Quechua

The Quechua area has a core and a periphery. Its core lies in central and southern Peru, where Quechua I and Quechua IIc varieties are spoken. More peripheral are Quechua IIa varieties and Bolivian Quechua. Still more peripheral are Argentinean Quechua, Ecuadorian Quechua, and Amazonian Quechua varieties.

In the core there have been relatively few second language learners in recent times, while the second language learners that learned Quechua in Cuzco had as their first language an Aymaran language which had a similar inflectional structure. In Peru Quechua was transmitted in relatively unbroken generational changes. When we move to the periphery the Quechua varieties were learned by more L2 learners in Bolivia, Ecuador and Argentina. Moreover, the kind of substrate languages begin to differ from Quechua when we move from Peru and Bolivia to Argentina and Ecuador. The learning conditions were also more fragmented in regions on the periphery; in Bolivia access to L1 varieties was more restricted than in Cuzco, but in Argentina and especially in Ecuador speakers of L1 varieties were even more scarce. Finally the amount of prestige negatively correlates with the distance from the former centre of Inca culture, Cuzco. This correlation only fails with respect to Ecuador, where Quechua gained a higher status as an expression of Andean identity - although perhaps not directly from the start. It fits, however, with the observation that Quechua in Argentina is not associated with the cultural values of Andean or Inca identity.

On the basis of this general sketch, we would expect Cuzco Quechua to be more like a Type 1 language than Bolivian Quechua and Argentinean Quechua and Ecuadorian Quechua to be more like a Type 2 language. In addition, we might conclude that all Quechua varieties should, to some extent, display Type 2 language characteristics because of the turbulent Andean history both under the Inca's and after the Spanish Conquest. I will now examine to what extent verbal inflectional structure was influenced by social factors in each variety.

In the 16th and 17th century the Andean population shrank dramatically. Moreover, large groups of Quechua speakers were moved across the Andes region because of forced labour and pressures of starvation. In such a situation we would expect that survivors from various varieties, and new learners from other language backgrounds would assimilate to each other's way of speech, and that koineisation processes would occur. Moreover, since complete social and cultural structures were ravaged, we would also expect that norms for 'correct Quechua' would be less stable. When Indians from smaller groups would learn Quechua in this situation, more interference from their languages would be expected. Nevertheless, the influence of this period on the general level of complexity in the verbal morphology has been quite small. The simplifications in inflection took place in Ecuador and Argentina for different reasons, and not in Peru itself.

How can this be explained? Perhaps the social disturbances were after all not serious enough to disturb language transmission. Perhaps the new learners of Quechua from other Indian communities could not exert their influence on Quechua, because of the prestige of Quechua or because of the possibly relatively low numbers of learners. Furthermore, perhaps the ayllus were maintained after all. The whole Quechua society may have been threatened, but its basic network structure and its system of language transmission may have remained unaltered.

The Andean catastrophe may be compared to a similar time of crisis in Norway when the Plague struck in the 14th century, decimating the population. It was in this period that Norwegian fundamentally changed its inflectional structure. There was a lack of central linguistic norms, and a high-prestige influence from High German traders, which led to loss of irregularities and categories in Norwegian. Perhaps the difference between Scandinavian and Quechua simplification does not lie in social circumstances but in the agglutinative structure of Quechua which may be more stable than Old Norse structure. Although there are quite a few categories in Quechua, the structure is relatively transparent in comparison with Old Norse structure.

Ecuadorian Quechua is much more Transparent and Economic than Bolivian and Peruvian varieties. Adelaar (1979: 483) says: "The general picture [of the Quechua morphology, WK] displays a great complexity together with great regularity. Except for the dialects of Ecuador and Columbia, where it has largely been lost, we see this morphological complexity in all modern dialects of Quechua."[171] This can be explained by two general differences between Ecuadorian and other varieties. First of all, the L2 learners of Quechua in Cuzco, and later in Bolivia were native speakers of Aymaran languages, which have an inflectional structure quite similar to Quechua (Cerrón-Palomino 1994: 103ff.). L2 learners in Cuzco and in Cochabamba were therefore already accustomed to a number of Quechua categories, fused morphemes, and unexpected affix ordering. The substrate languages of Quechua learners in Ecuador are hardly known, but it is quite conceivable that these languages did not have a similar structure.[172] Therefore, the distance to Quechua structure may have been larger, and these learners may have reduced the complex affix structure of Quechua. In Swahili L1 similarity also determined the extent of simplification in Katanga Swahili. As in Swahili, it is not only substrate influence that modified language structure in Ecuador.

The changes in Ecuadorian Quechua do not only lie in verbal inflection. Simplifications can also be found in the nominal inflection, in derivation, and in the phonology. If these changes were all due to substrate influence, we would expect to find some positive evidence of interference as well, which has not been apparent so far. Moreover, the new Ecuadorian system is not just old Quechua in a more analytic form. Instead, we find in Ecuador that relatively complex forms have been filtered out. Therefore, it is likely that Ecuadorian Quechua was heavily influenced by the Chinchay traders who came to Ecuador and used Quechua as a lingua franca. During its use as a communication tool between merchants on the coast and in the highlands, Quechua became simplified. Complex forms were avoided to make communication as smooth as possible. Quechua

[171] "Het algehele beeld is er echter een van grote complexiteit, naast grote regelmatigheid. Behalve in de dialecten van Ecuador en Columbia, waar zij voor een groot deel verloren is gegaan, vinden we deze morfologische complexiteit in alle moderne Quechua-dialecten terug."
[172] They may include Barbacoan languages (Adelaar, pers.comm.).

was acquired as a second language mainly by adults who were not corrected by a strong Quechua norm. When other Quechua varieties spread over Ecuador during the Inca period, the basis of Ecuadorian Quechua was already strong enough to block the introduction of more complex forms, like *su-nki*.

Muysken (1999) discusses the development of Ecuadorian Quechua after the Spanish Conquest. Some of the complex inflectional forms, like the fused morpheme *yki*, are still found in early Spanish sources. This might indicate that the Spanish source was influenced by Cuzco Quechua. However, it could also be a delayed effect of the simplifications started during the early spread of Quechua in Ecuador. Perhaps the loss of *su-nki* and the loss of plural objects in early Ecuadorian Quechua set a chain reaction in motion, which ultimately affected the whole person-number agreement system. By analogy *yki* was lost, and the only possible object marker left, *wa*, 1SG, was less frequently used (as is the case today), and completely lost in some varieties.

We could rephrase this by saying that early Ecuadorian Quechua object inflection had become unstable, when some aspects were not transmitted to Ecuador. When later Quechua was still used as a communication tool between different ethnic groups in Ecuador, the instability caused further changes. This picture corresponds to what happened in early Scandinavian. Because of several changes in metrical and phonological structure Old Norse had become an unstable language. Only a few social changes were needed, as on the Faroe Isles, to further destabilise the situation. The difference with Ecuadorian Quechua is that Ecuadorian Quechua was already halfway between a 'complete' system and a renewed reduced inflectional system, while Old Norse was at its height of inflectional complexity. That is, Old Norse was out of balance because of its total amount of complexity, while Ecuadorian Quechua was prone to change because there were inconsistencies in the inflectional paradigm.

The more limited simplification that occurred in Bolivian Quechua in comparison with Ecuadorian Quechua is in line with my hypotheses. The modified inflectional structure can be correlated to the way Quechua was transmitted to Bolivia. Spanish missionaries played a part and thus the new Quechua learners did not always have native speakers as their role models. Quechua spread slowly through Bolivia, and was mainly acquired by both adults and children who spoke Aymara as their first language. As a result Bolivian Quechua is hardly more Transparent or Economic than Cuzco Quechua. The changes that occurred in Bolivian inflections were not the result of Quechua being used as a lingua franca, or a trade language. Instead, the changes resulted from minor reanalyses of Quechua IIc structures, which had major ramifications (see above). These minor reanalyses which may have resulted from the particular Quechua varieties spoken in Bolivia, were also influenced by substrate languages. The loss of a separate *ku*-affix may be attributed to the lack of a separate number slot in Aymara.

In Southern Quechua, *su* is on its way to becoming a transparent object marker. This extension and regularisation of object agreement may be an autonomous change. Nevertheless, the occurrence of this change in Southern Quechua may be boosted by migrants from Cajamarca, because, as we saw above, in Cajamarca Quechua there has been a similar change in the status of *su*. This change is especially apparent in Argentinean Quechua, which suggests that influence from non-Cuzco varieties was higher in Argentina than in Bolivia. Although there are differences in the intensity of the changes, the similar direction of change in Bolivian and Argentinean Quechua suggests

that these two varieties have influenced each other as well, which is not remarkable, in the light of their location and history (cf. section 6.1).

The greater diversity found in Quechua varieties may have caused Argentinean Quechua to develop stronger simplification than Bolivian Quechua. In addition, the L1 learners had more diverse backgrounds in Argentina. There were speakers of various unrelated Indian languages, as well as Spanish learners of Quechua. Moreover, Argentina had less contact with the Quechua heartland than Bolivia. Finally, Quechua was a lingua franca between various groups in Argentina. It served communicative purposes, and there was a weak connection with Andean identity. Thus we can confidently assume that Argentinean Quechua would display more Type 2 characteristics than Bolivian Quechua, and indeed it does. Cerrón-Palomino (1987: 347) says:

> "After all, Argentinean [Quechua], like Ecuadorian [Quechua], displays a process of reduction in the derivative mechanisms of the language, a fact that is best explained as the effect of imperfect learning. When the links with Cuzco were cut, the mestizos and creoles would have learned Quechua in the same way as those who tried to learn the Cuzco variety. As a result, they spoke the Ayacucho variety, that is, without aspiration or glottalisation."[173]

However, Argentinean Quechua is far less Transparent and Economical than Ecuadorian Quechua, although when examined on a superficial level, both countries display similar social patterns. This may be explained by substrate differences; perhaps the original Argentinean languages had more in common with Quechua than the Ecuadorian languages. A more plausible explanation is that Ecuadorian Quechua spread over a region where all speakers of Quechua were basically second language learners, while in Argentina there was a core of Quechua 'mita' speakers, who functioned as a norm of 'correct' Quechua. In other words, Ecuadorian Quechua became less complex because it was brought to the region by second language speakers and it was used there almost exclusively as a second language.[174] By contrast, Argentinean Quechua had always been valued, since its introduction, as a means of inter-ethnic communication and was not used exclusively for trading purposes or only by foreign language learners.

I will now turn to a few general linguistic observations on Quechua simplification processes. When we compare what happened in Quechua with our predictions in 2.6, we find that Economy is not as important as predicted. The number of categories has only been substantially reduced in Ecuadorian Quechua. This high retention of categories may either be due to the Quechua agglutinative structure, or to social factors, that might not have been extreme enough to invoke more radical simplification. With respect to Transparency Ecuadorian Quechua substantiates the theory that allomorphy and fusion are avoided. In some cases, accidental homonymy has also been reduced (cf. section 6.3.3.4). The fusion of *n-ku* and *y-ku* and its consequences for Southern Quechua show that changes in the extent of Transparency also has its own dynamics. Although the

---

[173] "Despues de todo, el argentino muestra, como el ecuatoriano, un proceso de reduccion de los mecanismos derivativos de la lengua, hecho que se aviene mejor como efecto de un aprendizaje imperfecto. Cortados los vinculos con el Cuzco, los mestizos y criollos habrian aprendido el quechua como actualmente lo hacen quienes procuran aprender la variedad cuzquena: a la larga se termina hablando ayacuchano, es decir sin aspiracion ni glotalizacion."

[174] That is, at least during its introduction in Ecuador. Later, when Quechua spread over wider areas in Ecuador, it gained, of course, more native speakers.

predictions on Isomorphy are diffuse, we have found that both in Southern Quechua, and especially in Ecuadorian Quechua, Isomorphy has preference.

We saw in the chapters on Arabic and Scandinavian that the morphological simplification processes could also be analysed as incidental effects of other language-internal changes. For Scandinavian, and Germanic in general, it has been argued that early stress shift would explain later loss of inflection. For Arabic the argument is that a combination of universal laws of change and incidental phonological changes would be the basis for morphological simplification. Such language-internal explanations are implausible for Quechua.

First of all, the Quechua affixes vanished quite abruptly, and there were no intermediate stages in which there was a phonologically reduced form. Other parallels with processes of affix loss in Indo-European also fail, because the kind of affixes that disappeared in Quechua were not word-final, and they disappeared without any other stress shift, as in Germanic languages.

Moreover, two Quechua varieties contain a shift in metrical structure which is similar to those found in Germanic. In both Cuzco and Bolivian Quechua conditions on syllable structure have changed. Mannheim (1991) shows that the paradigmatic possibilities in the syllable onset have increased in these varieties, while at the same time the number of possible consonants in final positions has been reduced. We could expect that, as in Scandinavian, an enrichment of the beginning of a unit, such as the syllable in Quechua, might lead to erosion at the end of the syllable and the word. This is not the case, either in Cuzco Quechua itself or in any of the varieties based on it. Of course, this points to a quite different phonetic and prosodic structure in Quechua. However, it also suggests that the correlation between loss of erosion and shift in syllable peaks is less straightforward than our studies of Scandinavian imply.

Another common explanation for simplification suggests that historical laws could forbid certain categories, like the dual in Arabic, and uphold the removal of suffixes from the language (cf. Hodge 1970). However, except for Ecuadorian Quechua, we do not see any tendency in Quechua to reduce and erode affixes or to avoid certain categories. On the contrary, long strings of affixes are viable in all Quechua varieties, under circumstances of language contact, migration and demographic and social changes.

When reviewing the simplifications in Argentinean and Ecuadorian Quechua, we note that no affixal **positions** have been lost. Length of suffixal strings appear to be of no consequence to simplification in Quechua. When we compare this finding with what happens to prefixal strings in Swahili we may tentatively conjecture that suffixal strings are more stable in language change. This complies with acquisitional and typological findings that show easier processing of suffixes (cf. section 2.4.4.2). However, other social factors may account for this difference between Quechua and Swahili simplification.

The number of inflectional allomorphic affixes increase in Bolivian and Argentinean Quechua (cf. Lakämper & Wunderlich 1998). This apparent tolerance for allomorphy in languages that are moving towards a Type 2 kind of structure, is shared with Norwegian and Katanga Swahili.

Another observation is that Quechua simplification not only involves Economy but also Transparency and Isomorphy. In contrast, in both Arabic and Scandinavian

simplification, specific categories are more prone to simplification than a specific string of affixes or a specific expression. In Quechua, however, categories, like 'plural object' are also lost as a result of earlier promotions of Isomorphy or Transparency. In the next section on OT I will further elaborate on this.

6.6 Quechua changes from the perspective of Optimality Theory

6.6.1 Introduction

Three aspects of Quechua inflectional change are of crucial importance to this study. They are: the loss of all complex inflection in Ecuadorean Quechua; the fusion of plural and subject marking in Southern Quechua; and the rise of *su* as a 2nd person object marker in Southern Quechua. The constraints playing a major role in these discussions are:

LEX, the highest ranked constraint in all languages (cf. section 3.3.1) says: "A complex sign is well-formed if and only if it consists only of morphemes."

Several constraints belong to the family of faithfulness constraints: the **Max-**constraints, namely **Max(Sub)**, **Max(Obj)**, **Max(Num)**, **Max(1Sg.Obj)**, **Max(1Plur)**, **Max(2)**, and **Max(Pl)**, which require expression of features like subject agreement, plural and 2nd person to be as complete as possible. Often these features are not expressed in one separate affix, but in a fused affix. I count expression of features in fused affixes as one violation of the corresponding Max-constraint, and complete absence of the feature as a double violation of the constraint. As in other languages with fused and fissioned affixes, **Max(Cat)** also plays a role. Max(Cat) prefers a candidate with an affix that expresses features a and b above a candidate expressing only b.

In interaction with the faithfulness constraints, markedness constraints play an important role in Quechua. For example, constraints such as ***[Num, Obj]** and ***[Obj]** forbid specific features and feature combinations and ***Disc** forbids discontinuous affixes. *[X, Y]$_{DISC}$ forbids X and Y in discontinuous affixes, and *[X, Y]$_{AFF}$ in affixes in general.

Max(Order) is the counterpart in OT terms of the Isomorphy Principle. It consists of subconstraints like **Adjac**, which demands that a feature that relates to another feature must be expressed adjacent to the affix that expresses the other feature. The precise content of Max(Order) depends on our view of the Isomorphy Principle. Max(Order) may demand that the order in the morphology follows the order in syntax. Max(Order) may also demand that the order in the morphology complies with a universal order of categories, based on relevance of the category for the verb stem (cf. section 3.3.2). In this section I understand Max(Order) as stating that the order of affixes should be: OBJ - Tense - SUB - NUM, where NUM may only refer to the adjacent SUB marker.

6.6.2 Simplification in Ecuadorian Quechua

Essentially the changes in Ecuadorian Quechua result from the loss of complex expressions with object agreement, involving the affixes, *yki*, *su-nki*, and *wa-ncis*. In addition the combination of the object marker *wa* with the number marker *ku* referring to this object has become impossible. In informal terms this last change can be phrased as the loss of the possibility of *wa* to be combined with the rest of the inflectional complex. In other varieties of Quechua this affix had a more thematic instead of inflectional role; it

expressed that the action described by the verb moved in the direction of, or was directed at the speaker. This earlier function of *wa* seems to return in Ecuadorian Quechua.

We can model these changes from Ayacucho to Ecuadorian Quechua by a demotion of the faithfulness constraint Max(Obj). The choice of constraints that are promoted above Max(Obj) lead to three different formulations in OT terms of the changes in Ecuadorian Quechua.

In the first proposal the loss of complex object marking may be related to the demotion of a constraint that forced the use of fused affixes: Max(Cat). The lowering of this constraint under Max(Sub) entails that the optimal expression for subject agreement is without fused affixes. Since 2nd person object markers are fused with subject markers in Quechua, the demotion of Max(Cat) automatically leads to partial loss of object agreement. The promotion of Max(Sub) above Max(Cat) corresponds to an explanation for Ecuadorian simplification in terms of increasing Transparency. However, with this solution we cannot explain why *ku* no longer pluralises the object marker. Therefore, the promotion of another constraint is also needed, like *[Num, Obj], or Adjac, which forbids the plural marker *ku* to refer to the object affix. In this scenario, the Ayacucho Quechua constraint ranking is as in Figure 6.3.

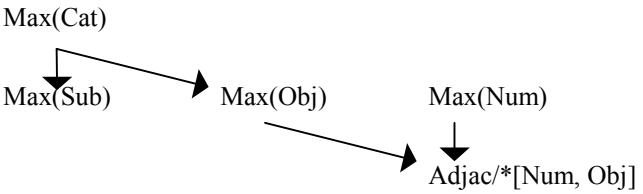

Figure 6.3 Constraint dominance relations in Ayacucho Quechua (Proposal 1)

Tableau 6.1 Input: Ayacucho Quechua *riku-?-rqa-?* see+PAST+2OBJ+3SUB

	Max(Cat)	Max(Sub)	Max(Obj)	Adjac/*[Num, Obj]
riku-su-rqa-nki PAST+2OBJ+3SUB ←		*	*	*
riku-rqa-ø PAST+3SUB	*!		**	

The winning candidate in Tableau 6.1 is *riku-su-rqa-nki*, because it is most specific in its expression of categories. In other words, it complies with Max(Cat), which ranked highest in Ayacucho Quechua.[175] This candidate has one violation mark under Max(Sub) and Max(Obj) since it expresses subject and object agreement with a fused, and even discontinuous affix (*su-nki* is a discontinuous port-manteau morpheme, cf. section 6.2.2.2). The other candidate, however, does not express the maximal number of features, and is therefore a violation of high-ranked Max(Cat). In the next tableaux we see that the ranking in Ecuadorian Quechua is as in Figure 6.4, where Max(Sub) and Adjac/*[Num, Obj] have risen (phonological shapes are given as in Ayacucho Quechua).

[175] The position of Max(Num) above Adjac follows from winning candidates like *riku-wa-rqa-nki-ku*, where *ku* pluralises the non-adjacent object marker.

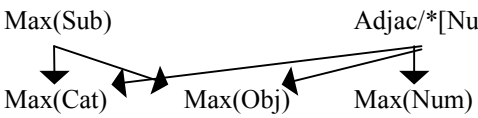

Figure 6.4 Constraint dominance relations in Ecuadorian Quechua (Proposal 1)

Tableau 6.2 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+2OBJ+1SUB

	Max(Sub)	Max(Cat)	Max(Obj)
riku-rqa-yki PAST+2OBJ+1SUB	*!		*
riku-rqa-ni PAST+1SUB ←		*	**

Tableau 6.2 shows that Max(Cat) has been demoted.

Tableau 6.3 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+1OBJ+3SUB

	Max(Sub)	Max(Cat)	Max(Obj)
riku-wa-rqa-ø PAST+1OBJ+3SUB ←			
riku-rqa-ø PAST+3SUB		*!	*

Tableau 6.3 shows that the analysis with Max(Cat) explains the maintenance of *riku-wa-rqa-ø*, while an alternative analysis with the promotion of a filter constraint like *[Obj] would not suffice, because in that case *riku-rqa* would win. Instead, it is only a **fused** object agreement that is impossible in Ecuadorian Quechua.

Tableau 6.4 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+1OBJ-PL+3SUB

	Max(Sub)	Adjac	Max(Cat)	Max(Obj)	Max(Num)
riku-wa-rqa-n-ku PAST+1OBJ-PL+3SUB		*!			
riku-rqa-ø PAST+3SUB ←?			**!	**	**
riku-wa-rqa-ø PAST+1OBJ(-SG) +3SUB ←?			*		**

Tableau 6.4 shows that the promotion of Max(Sub) cannot explain the impossibility of *riku-wa-rqa-n-ku*. In addition the promotion of a constraint like Adjac, or *[Num, Obj], is needed. In this tableau *riku-wa-rqa-ø* appears to be the optimal candidate for the Input see+PAST+1OBJ-PL+3SUB, but this, however, does not correspond to the data. Instead, *riku-rqa-ø* should be the optimal candidate (cf. the question marks). We may solve this by claiming that *riku-wa-rqa-ø* crashes, because the absence of a plural marker would be interpreted as singular number. Therefore, *riku-rqa-ø* is the optimal candidate. This is, however, a rather ad hoc solution.[176]

Apart from this problem, the disadvantage of this approach is that the promotion of Adjac and demotion of Max(Cat) accidentally take place at the same time. That is, we do not know of any instances where these two changes are unrelated, that is, where only *ku* is forbidden to refer to the object marker, with the affixes *yki* and *sunki* intact, or where

[176] Another solution for the impossibility of *riku-wa-rqa* with a plural meaning is to analyse 1st person and plurality as a unit, which must be expressed as a whole or not at all. In such an analysis, *wa-ku* would disappear, either because it is a discontinuous affix (in proposal 1), because it is a violation of *[Num, Obj] (in proposal 2), or because it does not comply with Max(Order) (in proposal 3).

the complex affixes have disappeared while *ku* still refers to the object. The advantage of this approach is that it underscores the notion that Ecuadorian Quechua prefers transparent marking.

A more uniform explanation for the Ecuadorian changes lies in the promotion of more general Economy constraints above Max(Obj). In this proposal all markedness constraints that concern a non-1st person singular object are promoted. We can phrase this differently by proposing a specific faithfulness constraint, Max(1Sg.Obj) above a general markedness constraint, *[Obj]. The ranking of Max(Cat), which I will not show here, remains stable in this proposal. The constraint ranking in Ecuadorian Quechua with respect to object agreement would have changed as follows:

Ayacucho Quechua Max(Obj) >> *[Obj].[177]

Ecuadorian Quechua: Max(1Sg.Obj)>> *[Obj] >> Max(Obj).

In this ranking Max(1Sg.Obj) is the only part of Max(Obj) that remains ranked above *[Obj]. This constraint reranking explains Ecuadorian simplification as an increase of general Economy. In this proposal the Ayacucho order is as in Tableau 6.5.

Tableau 6.5 Input: Ayacucho Quechua *riku-?-rqa-?* see+PAST+2OBJ+3SUB

	Max(Obj)	*[Obj]
riku-su-rqa-nki see+PAST+2OBJ+3SUB ←	*	*
riku-rqa-ø see+PAST+3SUB	**!	

In Ecuadorian Quechua, Output like *riku-su-rqa-nki* see+PAST+2OBJ+3SUB and *riku-wa-rqa-n-ku* see+PAST+1OBJ-PL+3SUB are evaluated as non-optimal since they violate *[Obj], cf. Tableau 6.6 and Tableau 6.7.

Tableau 6.6 Input: Ecuadorian Quechua riku-?-rqa-? see+PAST+2OBJ+3SUB

	Max(1Sg.Obj)	*[Obj]	Max(Obj)
riku-su-rqa-nki see+PAST+2OBJ+3SUB		*!	*
riku-rqa-ø see+PAST+3SUB ←			**

Tableau 6.7 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+1OBJ-PL+3SUB

	Max(1Sg.Obj)	*[Obj]	Max(Obj)
riku-wa-rqa-n-ku see+PAST+1OBJ+3SUB+PL		*!	
riku-rqa-ø see+PAST+3SUB ←			**

The only object agreement forms that are still optimal are candidates with an object marker for the first singular.

Tableau 6.8 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+1OBJ+2SUB

	Max(1Sg.Obj)	*[Obj]	Max(Obj)
riku-wa-rqa-nki see+PAST+1OBJ+2SUB ←		*	
riku-rqa-nki see+PAST+1OBJ+2SUB	**!		**

[177] I abstract away from the constraint *[3Obj], that is ordered above Faith(Obj) in all Quechua varieties.

In this solution the restriction on *ku* to refer only to adjacent affixes follows from the order Max(1Sg.Obj) >> *[Obj] >> Max(Obj). These constraints simply forbid plural objects. The downfall of this argument lies in the fact that it is by sheer accident that both the specific constraint Max(1Sg.Obj) ranks high, and that the corresponding *wa* affix is a lexically uniform affix, in contrast with e.g. *yki*.

The third solution is the promotion of a constraint based on the Principle of Isomorphy, which demands that the affix order strictly obeys the order OBJ - Tense - SUB - NUM(SUB). That is, suffixes in OBJ-position may only have features that refer to the object, suffixes in SUB may only have subject features, and in the final position number may only refer to the subject marker, its adjacent affix. This constraint, **Max(Order)**, forbids deviant orderings of categories, and it also forbids non-adjacent references. The promotion of such a constraint entails the loss of the forms that were lost in Ecuadorian Quechua. The earlier Ayacucho Quechua order versus the later Ecuadorian Quechua order would be:

Ayacucho Quechua: Max(Num)//Max(Obj) >> *[Obj] // Max(Order).

Ecuadorian Quechua: Max(Order) >> Max(Num)//Max(Obj) >> *[Obj].

Tableau 6.9 Input: Ayacucho Quechua *riku-?-rqa-?* see+PAST+2OBJ+3SUB

	Max(Num)	Max(Obj)	*[Obj]	Max(Order)
riku-su-rqa-nki see+PAST+2OBJ+3SUB ←		*		*
riku-rqa-ø see+PAST+3SUB		**!	*	

Tableau 6.10 Input: Ayacucho Quechua *riku-?-rqa-?* see+PAST+1OBJ-PL+3SUB

	Max(Num)	Max(Obj)	*[Obj]	Max(Order)
riku-wa-rqa-n-ku see+PAST+1OBJ-PL+3SUB ←			*	*
riku-rqa-ø see+PAST+3SUB	**!	**		
riku-wa-rqa-n see+PAST+1OBJ+3SUB	**!		*	

Tableau 6.11 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+2OBJ+3SUB

	Max(Order)	Max(Num)	Max(Obj)	*[Obj]
riku-su-rqa-nki see+PAST+2OBJ+3SUB	*!		*	
riku-rqa-ø see+PAST+3SUB ←			**	*

Tableau 6.12 Input: Ecuadorian Quechua *riku-?-rqa-?* see+PAST+1OBJ-PL+3SUB

	Max(Order)	Max(Num)	Max(Obj)	*[Obj]
riku-wa-rqa-n-ku see+PAST+1OBJ-PL+3SUB	*!			*
riku-rqa-ø see+PAST+3SUB ←?		**	**!	
riku-wa-rqa-ø see+PAST+1OBJ (-SG) +3SUB ←?		**		*

In Tableau 6.9 and Tableau 6.10 Max(Order) is ranked low, and all orderings are possible as long as the material stems from the lexicon. In Tableau 6.11 and Tableau 6.12 everything that does not conform to the template OBJ- Tense- SUB- NUM(SUB) is weeded out. This analysis, however, has the same problems with *riku-wa-rqa-ø*, (cf. Tableau 6.12) as the first proposal.

When comparing these three proposals, the first proposal looks the worst, since it has the problem of letting *riku-wa-rqa-ø* slip through, when it should not (cf. Tableau 6.4), and moreover, it uses more rerankings than the other two proposals. The third proposal has the same problem with *riku-wa-rqa-ø* but, in contrast with the second proposal, it explains why one particular object agreement form, *wa*, is still possible.

In addition, Ecuadorian Quechua history gives added insight into the workings of the various constraint rerankings. When we look at the history of Ecuadorian Quechua in more detail we find that *sunki* has not been attested in Ecuador, *yki* was attested until 1900, and *wa* is now disappearing. There are no data about how the plural object function of *ku* disappeared. These historical facts are problematic for the first proposal. The demotion of Max(Cat) below Max(Sub) needs an extra stipulation for the stage where *su-nki* disappeared while *yki* was still present in the language. This could be an initial promotion of a filter like *Disc, which forbids discontinuous affixes. This constraint only forbids -*su-nki-*, and -*wa-ncis*. In the next stage Max(Cat) may have been demoted. The loss of *wa* in some contemporary varieties of Quechua is an extra problem for this proposal. The third proposal also fails to justify the earlier disappearance of *sunki*. This could be resolved by splitting Max(order) into two constraints that behave differently with respect to *yki* and *sunki*. However, it is not clear what form these sub-constraints might take. In addition, the rise of Max(order) cannot explain the loss of *wa*. The second proposal can deal with all historical facts, when we assume that markedness constraints of an increasingly more general nature are promoted above the faithfulness constraint. However, this proposal cannot explain the path of loss of object agreement marking, though it can explain why *wa* finally disappeared. In this perspective, the loss of *wa* is the final completion of the gradual promotion of the markedness constraint *[Obj] above all parts of the Max(Obj) constraint.

The three kinds of constraints involved in the three proposals do not oppose each other, but actually reinforce each other. That is, when one of the constraints is promoted, the other constraints may be promoted as well, since they become floating. For example, when Max(Order) is ranked high, the markedness constraint *[Obj] floats with the Max(Obj) constraint, except for the Max(1Sg.Obj). This is shown when we replace the order of the third proposal Max(Order) >> Max(Obj) >> *[Obj], by the empirically equivalent order, Max(Order) >> Max(1Sg.Obj) >> *[Obj] // Max(Obj). In the third proposal *[Obj] and Max(Obj) are floating while their order is relevant in the second proposal. In other words, the rise of the Isomorphy constraint facilitates partial rising of Economy and Transparency constraints. Therefore, the constraints may have risen through mutual interaction.

Moreover, since each of the three reranking proposals has weak and strong aspects, we can outline a plausible scenario in which we relate the several reranking possibilities to the historical periods. In this scenario, simplification started with the loss of *wa-ncis* and *su-nki* which is explained by the promotion of a constraint that forbids discontinuous affixes: *Disc. This constraint caused Max(Sub) and Max(Cat) to float for most of the

cases, except with respect to *yki*, which compelled Max(Cat) to rank higher than Max(Sub). In the next stage the only fused affix, *yki*, disappeared as well and Max(Sub) no longer contained any exceptions, which implied that Max(Sub) was promoted. This promotion in turn made Max(Order) float for most of the cases with Max(Num), since only the pluralisation of the object by *ku* still violated Max(Order). Again, after complete generalisation of Max(Order) this function of *ku* was lost, and Max(Order) was promoted above Max(Num). Thus, Max(Order) was given a higher ranking, while *[Obj] and Max(Obj) were floating for most forms, with the exception of those forms containing the affix *wa*. This affix compelled Max(1Sg.Obj) to be ranked higher than *[Obj]. Now, if *[Obj] is also generalised, *wa* may disappear, as happens in some contemporary varieties. Finally, after lexicon reordering, that is, after the removal of non-used affixes, both *Disc, Max(Cat), Max(order) and *[Obj] are floating in the sense that they are never violated by any possible candidate that complies with LEX. This removal of all lexically licensed candidates that would violate high-ranking faithfulness constraints is called lexicon optimisation (cf. section 3.4). The order of simplification is as in Figure 6.5. At each step, the promotion of a constraint implies the loss of a complex aspect of Quechua inflection. Each promotion reorders the grammar and the lexicon with the effect that the promotion of the next constraint is facilitated.

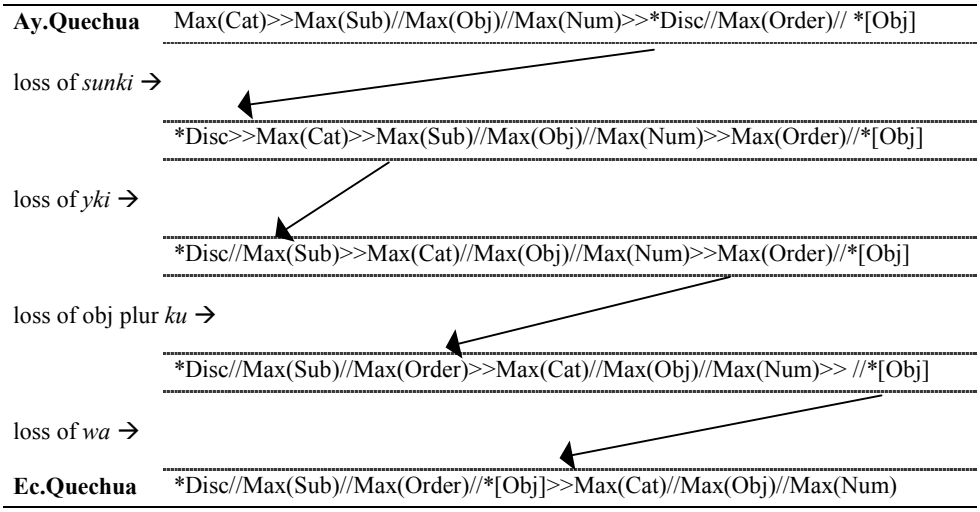

Figure 6.5 Constraint reranking from Ayacucho to Ecuadorian Quechua

The change from Ayacucho to Ecuadorian Quechua consisted mainly in constraint reranking. The lexicon did not change fundamentally, except for the affixes that could not surface anymore. These disappeared from speech and the lexicon was optimised. Table 6.9 shows the affixes in Ayacucho. The crossed affixes indicate the affixes that disappeared from Ecuadorian Quechua. In section 6.6.3 we will see that change in Southern Quechua had a much larger lexical component.

Table 6.9 Inflectional affixes in Ayacucho and Ecuadorian Quechua

Form	Meaning
-ni	+1
-nki	+2
-n/ø	+3
-ncis	+1.incl
~~-ku~~	~~+pl.excl.~~
-cis	+pl.incl.
-wa	+1obj
~~-yki~~	~~1→2~~
~~-su-nki~~	~~3→2~~
-rqa	+past

6.6.3 Changes in Southern Quechua

In the Southern Quechua varieties inflectional changes did not only concern affix loss as in Ecuador. Affix content was reinterpreted, affixes were fused, but also separated, and their distribution was modified. In section 6.3.3.2 I discussed the changes in the south under two headings: the fusion of the plural marker *ku* with the subject markers *y* and *n*, and the tendency of *su* to express only 2nd person object.

The fusion of subject markers and the plural marker as a lexical change may be attributed to a reinterpretation of Cuzco Quechua by Bolivian speakers (cf. Van de Kerke 1996a, b).[178] Because of this fusion, combinations of categories where a plural marker was added to an affix other than *y* or *n* could no longer be expressed. Instead of the earlier Cuzco forms other affix combinations were used and some categories were chosen at the expense of others, cf. Table 6.10 for the past tense in Bolivian Quechua.

In OT terms we rephrase this as follows: due to the new fused affixes, in several instances faithfulness constraints conflict with each other. For instance, in the first row in Table 6.10, in Bolivian Quechua either Max(1), Max(1Pl), or Max(2) must be violated in order to comply with Lex. In Cuzco Quechua, owing to the non-fused *y-ku* and *n-ku* affixes, the optimal candidate is able to comply with all three faithfulness constraints. In this respect, there is **less** lexicon optimisation in Bolivian Quechua. That is, in Cuzco Quechua the lexicon provides (non-fused) morphemes that result in fewer violations of faithfulness constraints than in Bolivian Quechua.

[178] This fusion could be the result of an earlier stage in which all instances where *ku* was not adjacent to *y* or *n* were wiped out, which resulted into the reinterpretation of *y-ku* and *n-ku*.

Table 6.10 Cuzco and Bolivian Quechua expressions of complex feature combinations

Input	Cuzco Output form	Output meaning	Bolivian Output form	Output meaning	Comments (A=Alternative)
1pl→2sg	rqa-yki-ku	1pl→2	rqa-yku	1pl	A: omit number in *rqa-yki.* In Argentinean *su* has extended to 1pl→2sg: *su-ra-yku*
1pl→2pl	rqa-yki-ku	1pl→2	rqa-yku	1pl	A: omit object number in *rqa-yki-cis*, which is the Argentinean form.
3pl→2sg	rqa-sunki-ku	3pl→2	su-rqa-nku	3pl→2	This form forces a reanalysis of *su*. Alternatives: *rqa-nku*, 3pl or *su-rqa-nki*, 3→2
2sg→1plexc	wa-rqa-nki-ku	2→1plex	wa-rqa-yku	→1pl	A: omit number in *wa-rqa-nki*
3sg→1plexc	wa-rqa-n-ku	3→1plex	wa-rqa-yku	→1pl	A: omit number in *wa-rqa-n*
2pl→1plexc	wa-rqa-nki-ku	2→1plex	wa-rqa-yku	→1pl	A: omit object number instead of subject person and number in *wa-rqa-nki-cis*
3pl→1plexc	wa-rqa-n-ku	3→1plex	wa-rqa-yku	→1pl	A: omit object number in stead of subject person and number in *wa-rqa-nku*

On the basis of Table 6.10 it appears that the first person, and plurality of the first person are most important in Bolivian, cf. the column under 'Output meaning'.[179] When these are involved, other persons and other numbers, irrespective of whether they are subject or object, are less important. In OT terms the ranking in Bolivian Quechua is Max(1Plur) // Max(1) >> Max(2) // Max(3) // Max(Pl), cf. Tableau 6.13.[180]

Tableau 6.13 Input: Bolivian Quechua *riku-?-rqa-?-?* see+PAST+1OBJ-PL+2SUB-PL

	LEX	Max(1Plur)	Max(2)	Max(Pl)
riku-wa-rqa-yku see+PAST+1OBJ-PL+?SUB ←			*	*
riku-wa-rqa-yki-cis see+PAST+1OBJ+2SUB-PL		*!		*
riku-wa-rqa-nki-ku see+PAST+1OBJ-PL+2SUB	*!			*

[179] In Cuzco Quechua, there is also a person hierarchy apparent from expressions with a double plural meaning. In most Cuzco Quechua varieties plurality is expressed only once. When there is both a plural subject and object, plurality of one of these must be omitted. Third person plurality is omitted when there is a second person involved, and second person when a first person is involved, cf. Cuzco Quechua: 2PL→1PL.EX, *wa-rqa-nki-ku*, instead of *wa-rqa-nki-cis*; 1PL.EX→2PL, *rqa-yki-ku* instead of *rqa-yki-cis* 3PL→2PL, *rqa-sunki-cis* instead of *rqa-sunki-ku*. Therefore, the Cuzco Quechua hierarchy is 1 >> 2 >> 3, which corresponds to an OT constraint ranking Max(Num1) >> Max(Num2) >> Max(Num3).

[180] In Argentinean there is one exception: 1PL→2PL is reduced to *ra-yki-cis,* 1→2PL, while it is reduced to *rqa-yku*, 1PL in Bolivian. Therefore, the ranking of Max(1Pl) and Max(2) is less strict in Argentinean Quechua.

So far I have assumed that the selection of solutions to the fusion of *–yku* and *–nku* in Southern Quechua (Bolivian and Argentinean Quechua) is motivated by the ranking of various Input-Output Faithfulness constraints. However, Output-Output (OO) relations may play a role as well. As discussed in 6.3.3.4, the choice of plural first object forms like *wa-(rqa)-yku* may be motivated by the analogy of (PAST) 1PL.**INCL**.SUB, *(rqa)-ncis* :: (PAST) 1PL.**EXCL**.SUB, *(rqa)-yku*. Analogously this would yield the following object agreement form: 1PL.**EXCL**.OBJ, *wa-(rqa)-yku* on the basis of (PAST) 1PL.**INCL**.OBJ, *wa-(rqa)-ncis*. In an OT account the OO relations as suggested by Benua (1995) will not work. Output-Output correspondences as conceived by Benua (1995) make use of a base form, on the basis of which other Output forms are computed. In Southern Quechua, however, the bases for analogy are 1PL.INCL forms, which are unlikely candidates upon which to base the whole paradigmatic structure. Instead, McCarthy's (2001) Optimal Paradigm model is more appropriate (cf. also section 3.3.3.3). Loosely speaking, this model would operate as follows: 1PL.**EXCL**.**OBJ**, *wa-rqa-yku* may violate faithfulness constraints like Max(2) and Max(Pl). However, this violation is not forced by a higher ranking Max(1Plur) as suggested above, but by a high-ranking OP-constraint that prefers the structure of 1PL.**EXCL**.**OBJ**, *wa-rqa-yku*, because of its paradigmatic motivation by the form 1PL.**INCL**.OBJ, *wa-rqa-ncis*. In other words, such forms are composed not only through a computation from Input to Output, but by a computation in which the whole paradigm is involved. Candidates that fit better within the whole paradigm are preferred. I will not discuss the details of this proposal further. The important aspect here is that although these forms violate several Transparency constraints, there may be other underlying paradigmatic correspondence constraints that explain their occurrence. Thus the preference that one semantic category may have over another is not a result of I-O Faithfulness constraint ranking, or some idiosyncratic decisions taken in the lexicon, but a result of another type of constraint, namely O-O Faithfulness constraints. Although in some cases such paradigmatic constraints reduce allomorphy and homonymy, this is not the case here (cf. also section 3.3.3.3). In Southern Quechua the irregular alternation *ncis* :: *wa-ncis* is in fact taken as the basis for other forms in the paradigm. Since these forms are irregular, the other forms become also irregular with respect to Transparency.

Now I turn to the extension of *su*, which, in contrast with *yku* and *nku* fusion, resulted in **more** lexicon optimisation in Southern Quechua. In section 6.3.3.2 I discussed the factors that led to the reinterpretation of the first element of *su-nki*, 2→3 into *su*, 2OBJ. I suggested that influence from other Quechua varieties, like Cajamarca and Ayacucho Quechua was likely and that the replacement of *su-nki-ku* by *su-nku* may also have motivated reanalysis. Finally, I conjectured that an autonomous development towards uniform expression of 2OBJ was possible.

All these developments led to an optimised lexicon in Bolivian and Argentinean Quechua. The adoption of *su* leads to less violations of constraints that deal with fusion, faithfulness and isomorphy. In Table 6.11 I show how many constraints are violated by the optimal candidates in the three southern varieties. Behind each form I give first the violation of "No Fusion"-constraints, for which I count a violation of $*[X, Y]_{DISC}$ as 2, and a violation of $*[X, Y]_{AFF}$ as 1 (see 6.6.1). The next number refers to the violation of Max(Order): anything that does not comply with OBJ-Tense-SUB-NUM(SUB) receives a 1. The third and last number refers to the violation of Max(Obj): 1 when object agreement is expressed in a fused affix, and 2 when it is not expressed at all.

Table 6.11 Comparison of constraint violation in 2.Obj forms in Quechua

	Cuzco		Bolivian		Argentinean		Ideal	
1→2	rqa-yki	111	rqa-yki	111	su-ra-ni	000	su-ra-ni	000
3→2	rqa-sunki	111	su-rqa	000	su-ra	000	su-ra	000
1p→2	rqa-yki-ku	111	rqa-yku	102	su-ra-yku	100	su-ra-ni-ku	000
3p→2	rqa-sunki-ku	111	su-rqa-nku	100	su-ra-nku	100	su-ra-n-ku	000
1→2p	rqa-yki-cis	111	rqa-yki-cis	111	ra-yki-cis	111	su-ra-ni	000
3(p)→2p	rqa-sunki-cis	111	su-rqa-cis	010	su-ra-nki-cis	211	su-ra	000
1p→2p	rqa-yki-ku	111	rqa-yku	102	ra-yki-cis	111	su-ra-ni-ku	000

Irrespective of the order of constraints in the various varieties, the lexical material of Cuzco Quechua results in most violations of constraints (21) for the optimal candidates. The reinterpretation of *su* leads to 14 violations of the same constraints by the optimal candidates in Bolivian Quechua, and to 12 violations in Argentinean Quechua. That is, the wider the distributional possibilities for *su*, the fewer violations of constraints occur. Although the exact number of violations depends on the specific constraints and Input forms we examine and how we weigh the violations in the comparison, it is clear that the Bolivian and Argentinean *su* affix gives rise to fewer violations of constraints. In the last column I have provided an 'ideal' reanalysis of *su*, that would lead to a minimal number of violations of Transparency and Isomorphy constraints.

In this analysis I have assumed that the main difference between Cuzco, Bolivian and Argentinean Quechua with respect to 2nd object marking resides in the lexical specification of the distributional possibilities of *su.* Instead, it could be argued that the affix specification of *su* has remained the same, and that a reranking of constraints has led to the wider occurrence of *su*. In fact, this is Lakämper & Wunderlich's (1998) view. They assume that in earlier Quechua there was a constraint, the Object-Subject-Constraint, that demanded fused affixes for some subject-object combinations, and non-fused affixes for other combinations. The disappearance, or in OT terms, the demotion of this constraint would have led to the extension of *su* to other forms. In section 6.3.3.2 I have argued that for several reasons this is an unlikely explanation for the Southern Quechua change. Instead of an explanation of the Southern Quechua change by constraint reranking, I assume a conspiracy of both internal and external factors that led to *su*-extension. What Lakämper and Wunderlich (1998) call a 'potentially symmetric system' in Southern Quechua, I call an optimised lexicon.

6.6.4 Conclusion

There are three factors that lead to change in inflection in OT: changes in the lexical content, reranking of morphological constraints, and reranking of phonological constraints. While in Scandinavian and Arabic phonological rerankings have played an important role, the changes in Quechua inflection are brought about by morphological rerankings. In addition, as discussed in the last section, changes in the lexicon, owing to autonomous development and dialect contact, have played an important role in changes in southern varieties.

In Ecuadorian Quechua constraints have been reranked with the result that complex affixes and complex affix order have been lost. Several kinds of constraints may be

responsible for the change in Ecuadorian Quechua. From a synchronic point of view it is difficult to decide what reranking is the best explanation for the inflectional changes. An examination of historical data seems to suggest that a combination of these constraints may best explain the diachronic path of Ecuadorian Quechua. More data on historical stages, especially with respect to the loss of plural object marking may change this scenario. In Moroccan Arabic there is a similar indeterminacy about what kind of constraint would be responsible for deflection (cf. section 4.7.3.2). However, no matter how exactly we analyse the constraint reranking, it is clear that in Ecuadorian Quechua the changes are due to morphological constraints that are better suited to a Type 2 speech community. The promotion of these constraints led to a removal of complex affixes from the Ecuadorian lexicon. This means that candidates that obey LEX in Ecuadorian Quechua also comply with other constraints that were violated in other Quechua varieties. In other words, in Ecuadorian Quechua the lexicon has been optimised. When we take a look at the five points in the second part of Table 3.2, which predict what would happen if a speech community changed from a Type 1 to a Type 2, we find that four of the five predictions come out in Ecuadorian Quechua: 1) the lexicon is optimised, 2) Max(Cat) is demoted while other Max constraints are promoted, 3) Max(Order) rises, and 4) filter constraints like *[ObjAgr] are promoted.

In Bolivian Quechua fusion of person and number and its consequences may be indicative of the mutual ordering of some constraints that are not in opposition in other Quechua varieties, that is, Max(1), Max(Pl). When we assume the Optimal Paradigm model of McCarthy (2001), however, a special kind of faithfulness constraints may be responsible for Southern Quechua irregularities. In Southern Quechua the changes in the lexical content of *su* lead to other optimal candidates that violate fewer constraints than their Cuzco counterparts. The question remains whether this lexicon optimisation (cf. section 3.4) in Southern Quechua is an extra motivation behind the change in the content of *su*, or whether this change is just a consequence of dialect contact. An argument for a drive towards lexicon optimisation in the extension of *su* is that *su* became a general 2nd person object marker in several locations in the Quechua speaking area. However, the same argument can be used contra an intrinsic drive; the areas where *su* was generalised have had contact with each other, and in other areas there is no such change in *su* status. Nevertheless, the **possibility** of *su* as a 2nd person object marker may stem from Cajamarca Quechua, while the actual **implementation** and **extension**, especially in Argentinean Quechua, may well be due to the different sociolinguistic circumstances in the south. On the other hand, the fusion of person and number has led to **more** violations of faithfulness constraints in Bolivian Quechua, and the direction of change with respect to *yku* and *nku* is away from lexicon optimisation. In Argentina the amount of optimisation has increased, while in Bolivian the optimisation with respect to both *su* and *nku* and *yku* is lower than in Argentinean Quechua. The predictions of Table 3.2, therefore, only partly hold true. Max(Order) and other Max constraints have become a little more important and in some respects the lexicon has been optimised to a greater extent. This slight shift towards linguistic Type 2 phenomena corresponds roughly with the lower degree of restructuring of the Quechua speech communities in the south in comparison with Ecuador.

A final observation is that the lexicon is less rapidly simplified than the grammar. In Ecuadorian Quechua, as well as in Katanga Swahili and Moroccan and Nubi Arabic,

constraints may be reranked and occasion a simple morphology with no or only highly transparent inflection. As a consequence the lexicon in these instances is also optimised. In such cases simplification of the lexicon follows reranking of constraints. However, when language changes stem from the lexicon itself, as in Bolivian fusion of *n* and *y* with *ku*, then the lexicon is reorganised only locally, and the constraints are slower in following the lexical changes. That is, while the lexicon in Southern Quechua moved in the direction of lexicon optimisation, we could imagine a much more optimal lexicon fitting an easier grammar. In the column under "ideal lexicon" in Table 6.11 above, I show how an ideal transparent inflection could be made by a replacement of a few features and conditions on affixes in Quechua. This "ideal lexicon" would violate less constraints and the constraint ordering could be more suited to Type 2 circumstances. There is a similar development in Scandinavian: although in Norwegian constraint reranking led to a highly economic and transparent inflection, the lexicon with its many irregular strong verbs still prevents full simplification.