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UNIVERSITY OF CALIFORNIA
Santa Barbara

A Grammatical Overview of Santa Mongolian

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy
in
Linguistics
by
Kenneth L. Field

Committee in charge:

Professor Charles N. Li, Chairperson
Professor Carol Genetti
Professor Marianne Mithun

December 1997

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ABSTRACT

A Grammatical Overview of Santa Mongolian

by

Kenneth L. Field

The Santa (or Dongxiang) nationality is one of the fifty-five officially recognized national minorities of the People's Republic of China. Numbering over 370,000 according to the 1992 census (Grimes 1992), the Santa live in southern Gansu Province in the arid and mountainous Dongxiang Autonomous County which is situated to the south of Lanzhou, the capital of Gansu province.

Santa is a Mongolic language. It has SOV word order with strictly suffixing, agglutinative morphology. Santa is mutually unintelligible with any other members of the Mongolic language family, including Baonan (or Bao'an), Monguor (or Tuzu), and Eastern Yugur (not to be confused with Uighur spoken in Xinjiang province in northwestern China), which are all spoken in the Gansu-Qinghai border region. These four languages are considered to be *orphans* of the Mongolic language family because there are no direct historical links tying them with Mongolic proper, and because of their geographic isolation from the rest of Mongolic proper as well. However, comparative methodology reveals that these languages are indeed of Mongolic origin.

My hypothesis is that Santa Mongolian has undergone at least two significant stages of contact-induced language change. The first stage, an example of language shift, which dates back to the emergence of the Santa language during the Yuan dynasty in the 13th or 14th century, is characterized by the presumed shift of a significant number of Turkic and also possibly Persian speaking people to Mongolic. The interference from this Turkic substratum is apparently responsible for the ultimate stress pattern found in modern Santa Mongolian as well as a number of other Turkic-like features.

The second stage, an example of language maintenance, is more recent, dating back perhaps only two or three hundred years and continuing to the present. It is characterized by intense contact with the Chinese Hui of Linxia in Gansu Province, Muslims who speak a northwestern Mandarin dialect. As a result of this contact, Santa has incorporated numerous Hui borrowings in the phonological, lexical, and morphosyntactic domains.

This dissertation is a grammatical overview of Santa Mongolian. My hope is that this work will not only serve as a general reference for both linguists and non-linguists alike but that it will be a valuable contribution in the study of contact-induced language change as well.

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LIST OF ABBREVIATIONS

- ¶ = Paragraph boundry in original published text in DHC
1PLEX = First person, plural, exclusive
1PLEXNM = First person, plural, exclusive, nominative case
1PLIN = First person, plural, inclusive
1PLINNM = First person, plural, inclusive, nominative case
1SG = First person, singular
1SGNM = First person, singular, nominative case
2SG = Second person, singular
2SGNM = Second person, singular, nominative case
3P = Third person
3PS = Third person, possessive
3SG = Third person, singular
A = Age, Dixon semantic type
AB = Ablative case
AC = Accusative case
ANS = Suffix for deriving adjectives from nouns
AS = Associative
Aux = Auxiliary verb
BAS = Borrowed adjective suffix
BN = Benefactive
BVS = Borrowed verb suffix
C = Color, Dixon semantic type
CL = Classifier
CM = Comitative case
COP.H = Copula verb, borrowed from Hui Chinese
COP.NEG = Negative marker for copula verb
COP.S = Copula verb, indigenous Santa
CS = Causative
DE = borrowed genitive/nominalizer/adverbial/associative marker from Chinese

DES = Desiderative
 Df = Difficulty, Dixon semantic type
 DHC = Bu He (1987) *Dongxiangyu huayu cailiao*, *Dongxiang discourse material*
 DL = Different event, Loose temporal
 DLD = Bu He (1983) *Dongxiangyu Cihui*, *Dongxiang Language Dictionary*
 DM = Different event, Immediate sequential
 Dm = Dimension, Dixon semantic type
 DO = Direct object
 DQ = Different event, Sequential
 DR = Duration
 DT = Dative case
 EDT = Gerard Clauson (1972) *An Etymological Dictionary of Pre-Thirteenth-Century Turkish*
 EXST = Existential verb
 GN = Genitive case
 HP = Human propensity, Dixon semantic type
 I.NEG = Irrealis negative marker
 I.NM = Imperfective nominalizer
 IMP = Imperfective
 IMPR = Imperative mood
 IMPR.NEG = Imperative and desiderative mood negator
 INST = Instrumental case
 INT = Intensifier
 IO = Indirect object
 IPA = International phonetic alphabet
 LC = Locative case
 LMT = Limitative
 MW = Measure word
 NEG = Negative marker
 NM = Nominalizer
 NP = Noun phrase
 ONOM = Onomatopoeia

P.AS = Positional associative marker
 P.NM = Perfective nominalizer
 PL = Plural
 Po = Position, Dixon semantic type
 Pp = Physical property, Dixon semantic type
 PP = Postpositional phrase
 PR.NM = Progressive nominalizer
 PRF = Perfective
 PROG = Progressive
 PRT = Sentence mood particle
 PS.NEG = Possessive negative
 Q = Qualification, Dixon semantic type
 QM = Question marker
 R.NEG = Realis negative marker
 R/C = Reciprocal/Collective
 RP = Reflexive possessive
 Sm = Similarity, Dixon semantic type
 SN = Same event, Integrative
 SP = Same event, Purposive
 Sp = Speed, Dixon semantic type
 SS = Same event, Simultaneous
 SUP = Superlative
 TCLD = (1990) Zhongguo Tujue Yuzu Yuyan Cihui Ji, *Turkic Languages of China Dictionary*
 TM = Temporal marker
 V = Value, Dixon semantic type
 VAS = Suffix for deriving verbs from adjectives
 VNS = Suffix for deriving verbs from nouns.
 VP = Verb phrase
 VS = Verbalizing suffix

Chapter 1

Introduction

This dissertation is a grammatical overview of Santa Mongolian, a language spoken in Gansu province in the People's Republic of China. My hope is that this work will serve as a general reference for both linguists and non-linguists alike. One of my objectives has been to touch on each of the subsystems of Santa grammar. Included are chapters on phonetics, phonology, morphology (which includes discussion of the verbal complex), the lexicon, the noun phrase and the postpositional phrase, and syntax. I have also included two short texts in Chapter 9. A general historical and linguistic background of Santa, as well as my methodology, is covered in Chapter 2.

Another objective has been to point out contact-induced language change whenever possible. This is because the language contact situation in the Gansu/Qinghai border region of China is so enormously interesting and pervasive. Moreover, studies in language contact phenomena, until recent years, have been lacking in the literature.

Since this dissertation is an overview, I do not consider any given chapter to be the complete and final word. The analyses in this dissertation are my own and cover structures that I have personally encountered in my own research. I have made no attempt to cover all the possible structures in Santa. I have however, gone into greater detail in three specific areas of Santa grammar. In Chapter 4, section 4.2, there is a discussion regarding Santa syllable structure and how it has been influenced by Chinese Hui. In Chapter 7, section 7.2.4, there is a detailed discussion about adjectives. And in Chapter 8, section 8.3, there is a discussion about non-finite clause-chaining strategies in Santa.

As research continues on Santa and related languages, I hope our understanding of Santa and the Mongolic language family as a whole will be greatly expanded.

Chapter 2

Background

2. Introduction

In this chapter, I will give some background information that will facilitate discussion in later chapters. First I will briefly discuss the historical background of the Santa nationality in section 2.1; then I will look at the linguistic background of the Santa language in section 2.2; then I will consider the language contact situation in section 2.3; next I will review the relevant literature in section 2.4; finally I will discuss my methodology in section 2.5.

2.1 Historical background

The Santa (or Dongxiang) nationality is one of the fifty-five officially recognized national minorities of the People's Republic of China. Numbering over 370,000 according to the 1992 census (Grimes 1992), the Santa live in southern Gansu Province in the arid and mountainous Dongxiang Autonomous County which is situated to the south of Lanzhou, the capital of Gansu province. The Yellow River forms the northwestern boundary of the county. Most of the county is situated at 6000 feet above sea level to the east of the town of Linxia. Linxia has been an important cultural, trade, and Islamic center for most of the national minorities of Gansu and Qinghai Province since the Yuan dynasty (1271-1368 A.D.). The Chinese name 'Dongxiang' (pronounced dunxiang), literally 'east villages', was given to them by the Hui (Chinese Muslims) and Han (non-Muslim Chinese) inhabitants of Linxia due to the fact that their villages are located to the east of Linxia. However, the people call themselves santa which is probably derived from the Middle Mongolian word sarta'ul referring to the Muslims of Central Asia. The Santa still practice Islam today. Throughout this dissertation, I will refer to the people and the language as Santa.

There is a great deal of ethnological and historical evidence suggesting that the Santa people were Islamic artisans of Central Asia captured by the Mongolian Army on its western expeditions during the late thirteenth or early fourteenth century. They have been classified as se mu ren, ‘people with colored eyes’, belonging to different ethnic groups speaking different languages in Central Asia. After being captured, they were brought back to Gansu and forced to acquire the language of their masters and settle in their present home land. (See Ma & Ma, 1982). The ethnic roots of the Santa nationality may be traced back to a mix of Turkic, Central Asian, Mongolic, and Chinese ancestors.

2.2 General linguistic background

Santa is a Mongolic language.¹ It has SOV word order with strictly suffixing, agglutinative morphology. Santa is mutually unintelligible with any other members of the Mongolic language family, including Baonan (or Bao’an), Monguor (or Tuzu), and Eastern Yugur (not to be confused with Uighur spoken in Xinjiang province in northwestern China), which are all spoken in the Gansu-Qinghai border region. These four languages are considered to be *orphans* of the Mongolic language family because there are no direct historical links tying them with Mongolic proper, and because of their geographic isolation from the rest of Mongolic proper as well. However, comparative methodology reveals that these languages are indeed of Mongolic origin.

Mongolic, together with the Turkic, Chuvash, and Manchu-Tungus language families, and even possibly Korean and Japanese, have been said to be subsumed under a proposed macro-stock called Altaic. These languages share many typological features (SOV, suffixing, agglutinative) and some common vocabulary. However, many scholars, most notably Sir Gerard Clauson (1957), do

¹ I will be using the term “Mongolic” to refer to what has been previously called the Mongolian language family. This usage parallels the usage of the term “Turkic”. The term “Mongolic” eliminates any possible misunderstandings. I will be using the term “Mongolian” to designate a particular language of the Mongolic language family and not the family itself.

not hold the view that all of these languages are genetically related. Clauson firmly believed that much of the similarity between Mongolic and Turkic was due to language contact. This view has been supported more recently by a panel of five linguists who concluded, ‘... all of us found that we regard the hypothesis of a grand Proto-Altaic family spanning the Eurasian landmass with considerable suspicion (Unger 1990:479).’ Thus, whether the Mongolic language family is related to Turkic, Chuvash, Manchu-Tungus, and possibly Korean and Japanese is still a matter of great debate.

Within the Mongolic language family, the situation is no less clear. Poppe (1965:7-24) classifies Santa as a descendant of Southern Middle Mongolian along with Monguor and Dagur. To this could also be added Baonan and Eastern Yugur. Unfortunately, there are no extant records of the Southern Middle Mongolian that Poppe has suggested. One feature that these languages share, is that initial /f/ and /h/ have been retained. The languages descended from Eastern Middle Mongolian (by Poppe’s classification) on the other hand, e.g. Khalkha and Ordos, have lost initial /f/ and /h/.

Binnick (1987), however, states that ‘... there is reason to doubt that any simple *Stammbaum* model can adequately capture the realities of Mongolian language history (Binnick 1987:181).’ And, ‘Given the nature of nomadic society, it is not surprising that the sharp, discrete dichotomies of the *Stammbaum* model, designed for sedentary populations living within communities with sharply defined boundaries, might prove less adequate to an understanding of Mongolian linguistic history than some kind of reticulated model (Binnick 1987:194).’ Binnick’s proposal is to differentiate the Mongolic languages in terms of a *central* and *peripheral* split. Those languages in the central group, which include Khalkha (or Mongolian), Buriat, Kalmuck, Oirat, and Ordos, share a number of properties which Binnick (1987) has identified, while those languages of the peripheral group do not. The languages of the peripheral group include Moghol (of Afghanistan), Dagur (of Heilongjiang Province), and Monguor, Baonan, Eastern Yugur, and Santa (of the Gansu-Qinghai border region). Binnick (1987) points out, ‘What these facts strongly suggest is that the members of the peripheral group

became isolated, perhaps at different times, from the members of the central group, but certainly prior to the period of significant shared innovations in the latter languages. That there was no period of unity of the peripheral languages is suggested not only by the geographic and historical facts, which do not directly concern us, but more relevantly by the lack of shared innovations not only across the group as a whole, but even relatively speaking, pairwise within the group (Binnick 1987:191-2).’ Binnick (1987) seems to assume that all the peoples speaking Mongolic languages in the peripheral group are ethnic Mongolians (see section 2.3 for my arguments against this position), and we know this is true of Moghol and Dagur from historical records. But there are no such historical records that show the four orphans are the same as Moghol and Dagur. However, Binnick does support the notion that these languages are *orphans* and thus they are difficult to classify using the *Stammbaum* model.

Santa shares a number of features with the central group proposed by Binnick (1987). It is a strictly suffixing agglutinative language with basic SOV word order. As a peripheral language, however, Santa differs from the central group and Middle Mongolian in a number of ways. It has lost distinctive vowel length (see section 4.5) and productive vowel harmony of which now there are only fossilized remnants (see section 4.4). Furthermore, Santa has an ultimate stress pattern (see section 4.3). Middle Mongolian, on the other hand, had word initial stress (Menges 1968). Other phonological features foreign to the central Mongolic group that can be found in Santa are a simplified syllable structure (see section 4.2) and a retroflex series of obstruents (see section 4.6). Khalkha (Poppe 1970:29-39), Oirat (Quejingzhabu 1987), and Barhu (Wu 1985) of the central group do not have a retroflex series of obstruents. Neither does Dagur (Enhebatu 1988) which is one of the peripheral languages. However, Baonan (Chen 1985, Chen 1987), Monguor (Hasibate’er 1985, Qingge’ertai 1991), and Eastern Yugur (Bao 1984, Bao and Jia 1991) all have a retroflex series of obstruents. This may be due to influence from Chinese or from Tibetan (Charles N. Li, personal communication).

2.3 Language contact situation

For many years, historical linguistics has relied primarily on internally motivated explanations while ascribing contact-induced language change a secondary role. P. Sture Ureland and Iain Clarkson expressed it this way in *Scandinavian Language Contacts*:

The role of language contact in causing linguistic change is not unknown in the history of linguistics. However, the genetic-evolutional view of change dominated the field in the past century and still prevails in most modern introductory books on historical linguistics. The spectacular success of the evolutionists in the Neo-grammarian camp as well as the consolidation of the synchronic structuralist and the generative paradigms in this century has made research on language contact a peripheral activity. The search for inherently conditioned evolutionary laws ... [and] the search for synchronic systematism in structural and generative grammars gave little or no space to the study of linguistic change caused by languages in contact (Ureland and Clarkson 1984:1-2).

But recent studies, such as Thomason and Kaufman's 1988 book, *Language Contact, Creolization, and Genetic Linguistics*, suggest that contact-induced language change is more common than once thought. Purely internally motivated explanations of language change often downplay or overlook the possibility of externally motivated ones, thus neglecting an important source of language change. Comprehensive explanations of language change should allow for and recognize the possibility of externally motivated explanations as well as internal ones. Externally motivated explanations do not seek to diminish the role of internally motivated ones, but to complement them.

If our goal as linguists is to account for a present or past synchronic state of any given language accurately, then we must look at the history of the language and the peoples who speak or spoke it and the social contexts in which the language is or was spoken. If this context includes or included interaction with

other language speaking people groups with widespread bilingualism, then the possibility of contact-induced language change should not be ignored.

Thomason and Kaufman's *Language Contact, Creolization, and Genetic Linguistics* contains a number of case studies exemplifying the results of contact-induced language change in a number of languages. One of the basic distinctions they make is the difference between *language shift* and *language maintenance*. This distinction plays a significant role in our understanding of the development of the Santa language.

My hypothesis is that Santa Mongolian has undergone at least two significant stages of contact-induced language change. The first stage, an example of language shift, which dates back to the emergence of the Santa language during the Yuan dynasty in the 13th or 14th century, is characterized by the presumed shift of a significant number of Turkic speaking people to Mongolic.² The interference from this Turkic substratum is apparently responsible for the ultimate stress pattern found in modern Santa Mongolian as well as a number of other Turkic-like features.

The second stage, an example of language maintenance, is more recent, dating back perhaps only two or three hundred years and continuing to the present. It is characterized by intense contact with the Chinese Hui of Gansu Province, Muslims who speak a northwestern Mandarin dialect. As a result of this contact, Santa has incorporated numerous Hui borrowings in the phonological, lexical, and morphosyntactic domains. Both of these contact situations are discussed in detail in sections 2.3.1 and 2.3.2.

2.3.1 Past contact: Turkic substratum interference in Santa

I hypothesize the presence of a Turkic substratum in Santa Mongolian. Linguistic evidence to support this hypothesis includes the Turkic-like ultimate stress pattern found in Santa and a number of Turkish loan words which preserve

² It is also possible that there were some Persian speaking people that shifted to Mongolic since at the time of the Mongol conquests there were significant numbers of Persians in Central Asia.

some Middle Turkic pronunciations. In the next section I will briefly discuss the contact-induced linguistic features in Santa that can be identified as being of Turkic origin. In section 2.3.1.2 I will discuss my tentative hypothesis of the source language which I believe to be a Middle Turkic language dating from the 13th or 14th century.

2.3.1.1 Turkic features in Santa

Menges (1968) discusses stress in Common Altaic as follows:

In Common Altaic, as in Common Uralic, the root syllable always retains the stress, so that the accentuation of the prima has become the rule, still followed in a great majority of the Uralic and Altaic languages. Generally it is supposed that this accent was expiratoric, a stress accent; in addition, or later in the history of the languages, a secondary accent developed on the last syllable of the word, which was the last suffixal syllable, as a musical or tonal accent, quite similar to the accentuation in Swedish. This accentuation is supposed to have finally led in the Turkic group to a combination of expiratoric and musical stress on the last syllable, so that in Turkic today there is an ultima accentuation slightly reminiscent of French. While *the Mongolian languages have prima accentuation throughout*, the Tungus languages seem to have both types of accentuation ... (Menges 1968:74, italics mine)

The picture that Menges paints suggests that Middle Mongolian had a prima, that is to say a word-initial stress pattern. Menges was probably unfamiliar with the Mongolic languages of China that have ultimate stress: Santa, Baonan,

Monguor, and Eastern Yugur.³ The ultimate stress pattern in Santa is discussed in detail in section 4.3.⁴

The Middle Mongolian word-initial stress pattern can still be found in a number of contemporary Mongolic languages and dialects including Khalkha Mongolian. The word-initial stress pattern of Khalkha is illustrated in the examples below. Examples are taken from Khalkha (Poppe 1970).

- | | | |
|-----|---------|------------|
| (1) | 'mori | 'horse' |
| | 'arbəŋ | 'ten' |
| | 'barixə | 'to catch' |

When there is a single diphthong or long vowel in the word, it receives the stress as in the Khalkha words below.

- | | | |
|-----|----------|---------------------|
| (2) | 'deerə | 'on, above' |
| | ga'luu | 'goose' |
| | da'lae | 'sea' |
| | u'laaŋ | 'red' |
| | xo'doodə | 'colon (intestine)' |

When there is more than one diphthong or long vowel in the word, the penultimate diphthong or long vowel receives the stress.

- | | | |
|-----|------------|-----------------------------|
| (3) | mori'ooroo | 'by means of his own horse' |
|-----|------------|-----------------------------|

As these examples show, the word-initial stress pattern in Khalkha is also sensitive to syllable weight, as examples (2) and (3) show above. The ultimate stress pattern found in Santa, however, is not sensitive to syllable weight. This is also true of the ultimate stress patterns found in the Turkic languages.

³ Ultimate stress is found on indigenous words of Mongolic origin. Borrowed words may not exhibit this stress pattern.

⁴ Also see section 5 below for discussion of the symbols '-', '=', and '+' that precede the Santa suffixes.

The ultimate stress pattern found in Santa, then does not appear to be a feature directly inherited from Middle Mongolian. Santa must have either a) acquired ultimate stress through intra-systematic language change or b) acquired ultimate stress through contact-induced language change.

If Santa acquired ultimate stress through intra-systematic language change, then the mechanism for this probably resembles Menges' hypothesis in Turkic that, 'a secondary accent developed on the last syllable of the word, which was the last suffixal syllable (Menges 1968:74)' and this eventually led to the development of ultimate stress in Santa. Although this hypothesis cannot be disproved, the evidence in favor of ultimate stress being acquired through contact-induced language change is strongly suggestive. One of the characteristic features of the Turkic language family is ultimate stress (Menges 1968). Furthermore, when a suffix is added, the stress shifts to the added suffix, except for a small subset of suffixes that don't cause the stress to shift. The stress pattern found in Turkic is identical to the pattern found in Santa.

If ultimate stress in Santa is a result of a Turkic substratum, when did this stress shift occur? Santa, Baonan (Charles N. Li, personal communication), Monguor (Mostaert 1964), and Eastern Yugur (Schwarz 1984) — the Mongolic orphans of the Gansu/Qinghai border region discussed in section 2.2 above — all exhibit ultimate stress on words of Mongolic origin. This suggests that ultimate stress may have developed in a common ancestor of these four languages. However, the historical development of each of these nationalities is so varied that a common genetic source is unlikely. (See Schwarz (1984) for his views on the origins of each of these nationalities.)

If the ultimate stress pattern in these languages did not come from a common genetic source, where did it come from? We have already discounted the possibility of Middle Mongolian having ultimate stress. Thus, the only other possibility is that ultimate stress developed *independently* in Santa, Baonan, Monguor, and Eastern Yugur. This is not as untenable as it first appears. There were large numbers of Turkic peoples living in Central Asia during the thirteenth and fourteenth centuries and the Mongol domination of China and Central Asia at

that time. Different groups of Turkic peoples shifting to Mongolic at that time would not be unusual given the socio-cultural conditions present at that time.⁵

I have hypothesized the possibility of a Turkic substratum in Santa. There is also evidence of a Turkic substratum in both Eastern Yugur and Monguor.

The Yellow Yugurs of China are a single ethnic group with a single origin which traces back to the Orkhon Uighurs (Schwarz 1984:57-68). Although this nationality's ethnic origin is Turkic, only one third of the Yellow Yugurs speak a Turkic language, Western Yugur. One third speak Eastern Yugur, the Mongolic language in question here, and the other third speak Chinese.

When the Mongols destroyed the Tangut Xixia state in the early 13th century, the Yugur came under Mongol control. This apparently led to the shift of a number of Turkic speaking Yugurs to Mongolic, thus creating the Eastern Yugur language. In addition to having ultimate stress, Eastern Yugur has a considerable number of Western Yugur (Turkic) loanwords. This point is important, because these loanwords should be viewed as retentions rather than loans. I make a similar point with respect to Santa below.

Father Louis Schram in his *The Monguors of the Kansu-Tibetan Frontier* (1954) presents conclusive historical evidence for the existence of a number of Shatou Turk clans that have been assimilated into the Monguor nationality. On their switch from Turkic to Mongolic he states:

The written sources and the tradition, however, clearly establish the fact that not all of the Monguors are of Mongol origin. There are no data, however, to explain the process by which the Shat'o group lost its original Turkish language and adopted that of the Monguors (Schram 1954:28).

Owen Lattimore writes in the Introduction to Schram's work:

⁵ I have chosen not to go into detail regarding Turkic-Mongolic relations of the thirteenth and fourteenth centuries. Good sources for this include Clauson (1962), De Rachewiltz (1983), Eberhard (1982), and Jackson (1978).

... the inclusion among the Monguor Mongols of Turkish (and Tibetan and Chinese) elements was not anomalous but a phenomenon of a kind that recurred again and again in Inner Asian history (Schram 1954:9).

The evidence supporting Turkic substrata in both Eastern Yugur and in Monguor as well as in Santa supports my hypothesis that ultimate stress in this areal group of Mongolic languages is not due to the presence of ultimate stress in a common genetic source, which we have no extant evidence for, but due to the presence of individual Turkic substrata in Santa, Eastern Yugur, and Monguor.⁶

The retention of prosodic features arising in the target language from the source language is not unusual. Thomason and Kaufman assert:

It is true that prosodic features of the original native language are frequently maintained in a shifting group's TL; intonation is one of the most striking features of both Irish and Indian English (1988:42).

A case of partial stress shift is discussed in Thomason and Kaufman as follows:

... several Russian dialects of Olonets, influenced by the typical Uralic word-initial stress pattern of the Finnic language Karelian, have moved all original word-final stresses to the first syllable of the word. Since non-final stresses remain on their original syllables, stress is still phonemic in these dialects (Thomason & Kaufman 1988:241).

A Santa stress shift due to Turkic substratum interference therefore is not an inconceivable situation. Admittedly, further historical and linguistic evidence is needed if this hypothesis is to be ultimately accepted.⁷

⁶ At this point, I have not yet found similar evidence for Baonan.

⁷ The types of evidence that would be supportive are historical records and documents from that era as well as further linguistic analysis of Santa for Turkic features. In addition, there may be ethnological and anthropological evidence that the Santa were not originally Mongols.

In addition to the ultimate stress pattern found in Santa, Santa also has a number of Turkic ‘loanwords’. I hypothesize in Chapter 6, section 6.3 that many of these words of Turkic origin may not be borrowings at all, but rather retentions from the original Turkic language that some of the ancestors of the Santa spoke. This is supported by the fact that some of these words of Turkic origin retain Middle Turkic pronunciations that are not found in any of the modern Turkic languages spoken in China today. That is to say that these words are not recent loans, but date back to the time when the Santa nationality was being formed. For a detailed discussion of words of Turkic origin in Santa, see section 6.3.

2.3.1.2 Tentative hypothesis of the source language

At this point, I want to make a very tentative proposal in regard to the Turkic language that the ancestors of the Santa may have spoken. This language may have been a form of Karakhanide (XI-XIII century) or Post-Karakhanide (XII-XIV century) Turkic.⁸ The reasons for suggesting this are a) that the periodization of Karakhanide or Post-Karakhanide Turkic coincides with the time of the Mongol conquest of Central Asia (see section 2.1 above); b) that Karakhanide or Post-Karakhanide Turkic has initial /s/ in such words as sıtsqɑ:n ‘rat’ which is retained in sidzɑqɑn ‘rat’ in Santa (see section 6.3 in Chapter 6); and c) the Karakhanides were Islamic Turks who ‘... were promoters of Islam over the Turkic paganism of the steppes (Menges 1968:26)’. Since the Santa are Muslim today, the fact that the hypothesized Turkic speaking substratum was Islamic is hardly surprising.

Moreover, as mentioned earlier, the self-appellation santa is probably derived from the Middle Mongolian word sarta’ul < sartaq which referred to ‘... the Turkish-speaking, mainly Muslim Central Asian people whom the Mongols called ‘Sart’. (Lattimore’s Intro to Schram 1954:6).’ A simple derivation of this word — /r/ > /n/ in syllable coda, syllable coda /q/ is lost — produces santa. (See section 4.2 for the historical changes that took place in Santa syllable

⁸ See section 6.3 below for a discussion of Turkic language periodization (Poppe 1965).

structure.) This appellation in itself, if the etymology is accepted, refers to Turkic-speaking peoples.

Finally, the Santa people do not consider themselves to be of Mongolic descent, even though they speak a Mongolic language (Ma Zixiang and Ma Tong, personal communication). Furthermore, the Santa do not consider themselves to be ethnic Han Chinese either. Historians such as Ma Tong and Ma Zixiang (personal communication) consider the ancestors of the Santa to be Central Asians. The ethnological facts, as well as the historical and linguistic facts, agree with my hypothesis that there was a Turkic substratum in Santa Mongolian.

2.3.2 Present contact: Hui borrowings in Santa

The Santa have lived alongside and interacted with the Hui of Linxia for hundreds of years. The language of the Linxia Hui (Hui, hereafter) is a northwestern Mandarin Chinese dialect that has been heavily altaicized. The Hui dialect is considered to be of the Zhongyuan Mandarin group in the Longzhong sub-grouping (Language Atlas of China 1988). This dialect is unusual in that it has only three contrastive tones; leans toward SOV word order, not SVO; and has a fledgling case system, a typologically rare feature for a Chinese dialect. Li (1983, 1984) makes no claims with respect to the source of the altaicization — whether the influence has come from a Mongolic or Turkic language or perhaps even both. These characteristics can be attributed to interference with the Turkic and Mongolic languages of the Gansu/Qinghai border region, which includes Santa. (See Li 1983, 1984 and Dwyer 1992 for more on Hui.) A comparison of linguistic features found in Santa and Hui is given below.

(4) Comparison of features in Santa and Linxia Hui

Santa (Mongolic)	Linxia Hui (Northwestern Mandarin)
a. SOV	a. SVO, SOV
b. suffixing, agglutinative	b. largely isolating morphology
c. no tones (ultimate stress)	c. three contrastive tones
d. full case system	d. fledgling case system

As we can see in (4) above, Santa and Hui are quite typologically distinct. But this has had little effect on Santa's inclination to borrow heavily from Hui. This is because a number of socio-historical factors contribute to language contact between the Santa and the Hui. These include 1) Dongxiang Autonomous County's close proximity to Linxia (a major community of the Hui) and nearby Hui settlements; 2) the Hui outnumbering the Santa by two to one: 485,366 to 237,879 respectively in 1982 (Ma Zhengliang 1988:7); 3) both the Hui and the Santa people being Muslim and not ethnically identifying themselves with the Han Chinese; 4) the dominance of the Hui culture; and 5) the Hui and the Santa interacting and intermarrying for perhaps centuries (Schwarz 1984: 99-100).

If we examine these factors more closely, we see first that the Santa and the Hui are in close proximity. This is a prerequisite for contact. Secondly, we see that mutual identity and commonality are established through religious and ethnic lines (both being Muslim and non-Han). This promotes interaction and contact. Thirdly, an asymmetrical relationship with the Santa is formed through the relative dominance of Hui culture and population. This results in the Santa borrowing from the Hui language. Finally, the extended length of their interaction (likely hundreds of years) results in more intensive borrowing. The overall effect of these factors with respect to Santa is that it has incorporated over 2000 lexical items from Hui, including nouns, verbs, and adjectives. See chapter 6 for a more detailed discussion of Hui Chinese loans in Santa. In addition to lexical items, there are a number of borrowed phonological and morphosyntactic features as well.

Phonologically, Santa has over time changed from having a Mongolic type syllable structure to a Chinese type syllable structure. In fact, Santa syllable structure is identical to Hui syllable structure. For a detailed discussion of this, see section 4.2 in Chapter 4.

Morphosyntactically, Santa has a hybrid equational construction which employs the copula verbs from both Santa and Hui. An example of this is given in

(5) where the Chinese copula shì falls between the two NPs and the Santa copula wo follows the two NPs.

- (5) “əṇə ʃi mi-ni qudoŋo wo.” F06:59
 this COP.H ISG-GN knife COP.S
 “This is my knife.”

For a more detailed discussion of this construction, see section 8.1.3.1 in Chapter 8.

Another borrowed morphosyntactic construction is the manner adverbial construction. In Chinese, onomatopoeic and manner adverbials precede the verb and are set off with the particle de. An example from Mandarin Chinese is given in (6).

- (6) nèi-ge zhōng dīngdāng-dīngdāng-de xiǎng. (Li & Thompson 1981:328)
 that-CL bell dingdong-dingdong-DE make.noise
 “That bell makes noise in a dingdong-dingdong manner.”

A similar example from Santa is given in (7) where the onomatopoeic phrase əṇdzi əṇdzidə precedes the verb oṇGonoṇə ‘cry out’.

- (7) sudoro-nə əṇdzi əṇdzi=dzi oṇGono=nə. T4:006
 inside-R/P ONOM ONOM=DE cry.out=IMP
 Inside of it there is [someone] crying out in a “əṇdzi əṇdzi” manner.

For a more detailed discussion on manner adverbials, see section 8.2.2.1 in Chapter 8.

2.3.2.1 Santa Mongolian and the Borrowing Scale

The ‘borrowing scale’ proposed by Thomason and Kaufman in their 1988 publication, *Language Contact, Creolization, and Genetic Linguistics* is given in (8) below. (See discussion of Thomason and Kaufman 1988 in section 2.4.2.5.) The purpose of this scale is first, to show that there is a strong correlation between

intensity of contact — from casual contact to very strong cultural pressure; and extent of borrowing — from lexical borrowing only to heavy structural borrowing. The second purpose is to classify languages according to this scale.

(8) Borrowing Scale (Thomason & Kaufman, 1988:74-6)

Type 1 Casual contact: lexical borrowing only

Type 2 Slightly more intense contact: slight structural borrowing

Type 3 More intense contact: slightly more structural borrowing

Type 4 Strong cultural pressure: moderate structural borrowing

Type 5 Very strong cultural pressure: heavy structural borrowing

If we consider the linguistic evidence presented above, then according to Thomason and Kaufman's borrowing scale, Santa straddles the fence between a type 4 and a type 5 language. This means that Santa has moderate to heavy structural borrowing resulting from strong to very strong cultural pressure. The major linguistic difference between a type 4 and a type 5 language is that borrowing of the type 5 kind leads to 'significant typological disruption (T & K 1988:75)' while type 4 borrowing results in 'relatively little typological change'. The hybrid equational construction discussed briefly above is a good example of a possible typological change in process. Whether Santa will one day cross the line to a type 5 language is a function of time and the Santa's willingness to be more fully acculturated to the socio-cultural pressures of the Hui and the Hui language. The Santa face the same challenge as a host of other ethnic nationalities in the People's Republic of China — how to maintain their identity and live at peace with their neighbors at the same time.⁹

⁹ In my opinion, the Santa language is not currently endangered. Although the Santa are educated in Chinese, attendance is quite low. In addition, those who do attend do not necessarily complete high school, and very few go on to higher education. This trend is indicative of the Santa people's unwillingness to be completely assimilated.

2.4 Review of the literature

In this section I will look at previous publications that are relevant to this current work. These include other grammatical descriptions of Santa in section 2.4.1, language contact publications in section 2.4.2, and works concerning the origins of the Santa nationality in section 2.4.3.

2.4.1 Other grammatical descriptions of Santa

The work in this dissertation primarily represents my own analysis of Santa. Other grammatical descriptions that are available are Liu (1981) and Bu (1986), both published in Chinese; and Todaeva (1961) published in Russian.

The data that I have drawn from represents a composite of my own data (collected in Linxia in the summer of 1990 and in Lanzhou and Linxia in the fall of 1991) and data from publications in Russian: Todaeva (1961); and Chinese: Bu (1983, 1987), and A Ibrahim (1987).

These publications are briefly reviewed below.

2.4.1.1 Todaeva's *Dunsianskii Iazyk*, The Dongxiang Language

Todaeva (1961) is the first extended grammatical description of Santa that I am aware of. Todaeva was a noted Russian linguist who published extensively on the Mongolic languages of China, Mongolia, and the former U.S.S.R..

The first half of Todaeva (1961) includes discussion of the phonetics, phonology, morphology, and syntax of Santa. Todaeva draws upon her widespread knowledge of other Mongolic languages for comparative analysis with Santa. She recognizes that Santa preserves many archaic features that many other Mongolic languages have lost (Todaeva 1961:5).

The second half of her book consists of 8 Santa texts, their translation into Russian, and a fairly complete Santa-Russian glossary of the vocabulary used in the texts.

2.4.1.2 Liu Zhaoxiong's *Dongxiangyu Jianzhi*, Grammatical Sketch of Dongxiang

Liu (1981) is the first grammatical description of Santa of any length published in China. It consists of four sections, the first three of which are devoted to phonological, lexical, and syntactic descriptions of the Santa language. Morphological description is subsumed under the section on syntactic description. The last section is a glossary of over 2000 lexical items. Unfortunately, the glossary is not alphabetized and is thus difficult to use.

As a descriptive work, Liu Zhaoxiong's sketch is invaluable.

2.4.1.3 Bu He, editor, *Dongxiangyu he Mengguyu*, Dongxiang and Mongolian

Bu (1986) is the most complete grammatical description of Santa published in any language to date. The author is a linguist of Mongolian descent who specializes in the Mongolic languages of China. This work consists of four sections which are devoted to phonological, morphological, syntactic and lexical descriptions. At 265 pages, this is a sizable work, filling in a lot of the areas not covered by Liu (1981). In addition, as the title suggests, there is extensive comparative study of Santa with the present-day Mongolic languages of China, Mongolia, and the former U.S.S.R. as well as with Script Mongolian, an ancient written form of Middle Mongolian still used today in Inner Mongolia and currently being resurrected in the Republic of Mongolia. Script Mongolian preserves the Middle Mongolian pronunciation in its writing system, including many -VgV- sequences that have become V: in contemporary pronunciations (Bu 1986:60-5).

Overall, the level of scholarship in Bu (1986), especially with respect to comparative analysis, is impressive.

2.4.1.4 Bu He, editor, *Dongxiangyu Cihui*, Dongxiang Language Dictionary

Bu (1983) is the only sizable work to date on the Santa lexicon. Both Todaeva (1961) and Liu (1981) contain glossaries, but they are much shorter. Bu (1983) contains over 4500 entries. The Santa lexical entries are glossed in

Chinese. Parts of speech, language of origin, and the equivalent Script Mongolian translation if any are also indicated. Approximately 50% of the entries are borrowed from Hui. The pervasiveness of Hui loans in Santa is striking. See Chapter 6 for more on the influence of Hui on the Santa lexicon.

2.4.1.5 Bu He, editor, *Dongxiangyu Huayu Cailiao*, Dongxiang Discourse Material

Bu (1987) represents the largest collection of narratives published in Santa. It includes an introductory section comprising 47 pages (20 short chapters) of pedagogically oriented Chinese-to-Santa translation sentences, a collection of 10 proverbs and 26 riddles, and 27 narratives of varying length.

The contents are formatted in an interlinear style throughout. The first line is the Santa text given in IPA; the second line is Mongolian Script¹⁰; and the last line is the sentence-by-sentence Chinese translation of the Santa.

Although the narratives in this collection are edited and thus not do not represent completely natural oral discourse, they still represent an important body of work approximating oral data. Since Santa is not a written language, significant differences between written and oral language are less likely to occur in these texts.

2.4.1.6 A Ibrahim's *Dongxiangyu Huayu Cailiao*, Dongxiang Discourse Material

A Ibrahim (1987) consists of two Santa narratives with morpheme-by-morpheme glosses in Chinese followed by free Chinese translations of the texts. In addition, A Ibrahim (1987) includes a short glossary and translation of all the suffixes found in the texts.

¹⁰ This is not a written form of Santa, but classical Mongolian Script used to translate words of Mongolic origin.

2.4.2 Language contact publications

Publications on contact-induced language change directly relevant to this current work include four articles published by Charles N. Li between 1983 and 1986 and Thomason and Kaufman's 1988 book, *Language Contact, Creolization, and Genetic Linguistics*.

2.4.2.1 Charles N. Li's *Languages in contact in Western China*

In his 1983 article, Li briefly discusses contact-induced features found in Wutun (a northwestern Mandarin Chinese dialect heavily influenced by Tibetan) and Hui (a northwestern Mandarin dialect heavily influenced by Altaic). Li goes into more depth in his discussion of contact-induced features found in Baonan (a Mongolic language heavily influenced by Hui). These features include lexical, phonological, and syntactic items. Li found that 50-55% of the Baonan lexicon consists of Hui loans. He also found that Baonan is in the initial stages of developing tone due to Hui Chinese influence. Syntactically, Baonan has borrowed the resultative, equational, and comparative constructions from Hui.

2.4.2.2 Charles N. Li's *From verb-medial analytic to verb-final synthetic language: A case of typological change*

Li's 1984 article addresses contact-induced language change in Hui, a northwestern Mandarin Chinese dialect that has been heavily altaicized. Phonologically, Hui only has three tones as compared to four or more for other northwestern Mandarin dialects. (Altaic languages are not tonal). Limited instances of vowel harmony can also be found. Morphologically, Hui is unusual in that it has a case system, a feature typologically unknown to Chinese. In addition, Hui favors verb-final word order and postpositions. Li points out that these features are common to Altaic and hypothesizes the presence of an Altaic substratum although he does not specify whether it might be Turkic or Mongolic.

2.4.2.3 Charles N. Li's Contact-induced semantic change and innovation

Published in 1985, this article examines contact-induced semantic change. Li provides two lexical examples and one syntactic example of semantic change in Baonan and a morphological example of semantic change in Wutun. One of the lexical examples of semantic change in Baonan is explained by Li as follows:

Through contact with Hui, the Baonan people saw the need for the semantic notion, 'thousand'. Instead of borrowing the Hui morpheme, /tʃan/, for 'thousand', the Baonan people copied the homophonous nature of the Hui expressions for 'one day' and 'one thousand' by assigning the same two readings to their indigenous word /nəɡudár/. Subsequent re-analysis of the word /nəɡudár/ yields the new phonologically-indigenous morpheme /-dər/ 'thousand' (Li 1985:328-9).

2.4.2.4 Charles N. Li's *The rise and fall of tones through diffusion*

Li's 1986 article explores the development of tones in Baonan Mongolian and the loss of tones in Wutun, a northwestern Mandarin Chinese dialect. Baonan is in the process of gaining phonemic tone through contact with Hui. Indigenous Baonan words have predictable ultimate stress, but Hui loans have contrastive high and low pitch. Wutun, on the other hand, has lost all tones through contact with Amdo Tibetan, a toneless Tibetan language.

* * * *

Li's articles on Baonan and Hui are essential building blocks for my research. Many similarities can be found in the historical development of Baonan and Santa, which are sister languages. The main point of interest, however, is not found in the features common to these Mongolic 'orphans', but the similarities found in their contact-induced features such as 1) the pervasiveness of Hui loans, 2) the borrowed equational construction, and 3) the borrowed resultative construction.

Li's work on Hui is equally important because Hui is the major source of contact-induced features in Santa.

2.4.2.5 Thomason and Kaufman's *Language Contact, Creolization, and Genetic Linguistics*

Thomason and Kaufman's *Language Contact, Creolization, and Genetic Linguistics* (1988) is the most important work of its kind to date since Uriel Weinreich's *Languages in Contact* (1968). The commonly held assumption that language change arises chiefly through intrasystematic changes is not advocated by Thomason and Kaufman (T & K henceforth). Their position is that 'the history of a language is a function of the history of its speakers, and not an independent phenomenon that can be thoroughly studied without reference to the social context in which it is embedded (T & K 1988:4)'. Consequently, social factors may and often do prevail over purely linguistic ones such as markedness and analogic change in determining what is borrowed.

T & K identify two distinctly different types of contact-induced language change: borrowing and substratum interference. T & K define borrowing as 'the incorporation of foreign features into a group's native language by speakers of that language: the native language is maintained but is changed by the addition of incorporated features (T & K 1988:37)'. When borrowing occurs, vocabulary items are routinely the first features incorporated.

As already discussed above, a very useful contribution of T & K's book is their proposed 'borrowing scale'. See section 2.3.2.1 for discussion of the borrowing scale and how Santa is classified according to it.

Substratum interference, on the other hand, is defined by T & K as 'a subtype of interference that results from imperfect group learning during a process of language shift. That is, in this kind of interference a group of speakers shifting to a target language fails to learn the target language (TL) perfectly. The errors made by members of the shifting group in speaking the TL then spread to the TL as a whole when they are imitated by original speakers of that language (T & K 1988:38-9)'. Phonology and syntax are generally initially affected by substratum

interference. Vocabulary items are least affected by this type of contact-induced language change.

The distinction between borrowing and substratum interference and the results produced by these two different types of contact-induced language change will be crucial for solving the puzzle of the Santa language and its development.

Also included in T & K's book are nine case studies of contact-induced language change. I hope that this present work will be a valuable addition to the limited amount of literature available on this topic.

2.4.3 Works concerning the origins of the Santa nationality

Little is definitely known about the origin of the Santa nationality. Since the answer to this question is important with respect to the current work, previous speculations regarding the origin of the Santa nationality are evaluated below.

2.4.3.1 Ma & Ma's *Concerning the Origin of the Santa People*

Published in 1982, Ma & Ma's article suggests that the Santa people were Islamic artisans of Central Asia captured by the Mongolian Army on its western expeditions during the late thirteenth or early fourteenth century. These artisans were classified as se mu ren, 'people with colored eyes', belonging to different ethnic groups speaking different languages in Central Asia. After being captured by the Mongols, they were forced to acquire the language of their masters and settle in their present home land. This scenario suggests that the Santa language may originally have come into being through the process of language shift.

2.4.3.2 Henry G. Schwarz's *The Minorities of Northern China*

Schwarz discusses three theories concerning the origin of the Santa nationality. The first is an oral tradition and asserts that the Santa are 'descendants of Mongol soldiers who during Chinggis Khan's campaigns settled in the Hezhou region (now the area around the Dongxiang autonomous county) where they ultimately lost their military function and status (Schwarz 1984:99).'

The second theory claims that the Santa were originally part of the Chagatay khanate¹¹ which prospered in Central Asia. After being converted to Islam, they moved southward due to discrimination where one branch eventually ended up in the Hezhou area. Another ended up in Inner Mongolian and is known today as the Alashan Left Banner.

The third theory maintains that the Santa were originally Hui who lived in the current region inhabited by the Santa who socialized with Hans and Mongols for generations.

Schwarz dismisses the last theory as untenable due to lack of supporting evidence, while leaning to the first one. He asserts, 'at any rate there is a general consensus that the main stock of the original Dongxiang was Mongol, not Hui (Schwarz 1984:99).' However, the Santa people strongly reject any notion that they are of Mongolic descent (Ma Tong and Ma Zixiang, personal communication). Ma Tong and Ma Zixiang maintain that the ancestors of the Santa were primarily Central Asians. This fact supports my hypothesis that a Turkic substratum exists in Santa Mongolian. The second theory mentioned by Schwarz above, that the Santa people were originally part of a Chagatay khanate, is the most favorable with respect to my work, but even the first would not count out the possibility of a Turkic substratum.

2.5 Methodology

In this section I will discuss methodology, the database for this work, and the transcription systems that were used.

With respect to the analysis of the Santa data, my aim was to present what I know about Santa with the data that I have at hand. In addition to this, I have relied mostly upon examples from texts. Occasionally I have consulted data that was elicited from a language consultant, but I have avoided these kinds of examples whenever possible. The consequence of this is that the linguistic

¹¹ Genghis Khan parceled out these khanates (or realms) to his four sons. The Chagatay khanate was ruled by his son Chagatay.

structures I cover here tend to be those that occur more frequently in folktale and narrative data. Linguistic structures that are more common in everyday conversational data, for instance, may not be treated here.

2.5.1 The database

The core of my database consists of 23 folktales and narratives from various sources.¹² These sources include A Ibrahim (1987), Bu He (1987), Todaeva (1961), and data that I collected in Linxia and Lanzhou in Gansu province, the People's Republic of China in 1990 and 1991 respectively. These texts are listed in Table 2.1.¹³

¹² Folktale is indicated by 'F' in the genre column of Table 2.1 below, and narrative is indicated by 'N'.

¹³ The fact that the surnames (which come first in Chinese) are nearly all identical in Table 2.1 below doesn't mean that the narrators are related. Mǎ which literally means 'horse' is the most common Santa surname and is probably derived from Mohammed.

ID	Name of Story	Genre	Sentences	IUs	Narrator	Source
A1	The small grandson	F	149		Unknown	A Ibrahim (1987)
A2	The two brothers	F	102		Unknown	A Ibrahim (1987)
BH	A boy and his horse	N		40	Mǎ Jùn	Field (7-25-90)
F05	The cat and the tiger	F	21		Mǎ Xuětiān	Bu He (1987)
F06	The goat and the sheep	F	75		Mǎ Ténglín	Bu He (1987)
F07	The lion and the tiger	F	56		Yáng Sēnlín	Bu He (1987)
F08	The tiger and the rabbit	F	54		Mǎ Ténglóng	Bu He (1987)
F11	“Leaky pot”	F	54		Mǎ Ténglín	Bu He (1987)
F13	The man who grew horns	F	10		Mǎ Jīnzhōng	Bu He (1987)
M1	Santa hospitality	N		34	Mǎ Zhìxīn	Field (7-31-90)
M2	Green apricots	N		17	Mǎ Zhìxīn	Field (7-31-90)
M3	Now and then	N		66	Mǎ Zhìxīn	Field (7-31-90)
M4	My childhood	N		41	Mǎ Zhìxīn	Field (7-31-90)
M5	The Peach River	N		67	Mǎ Zhìxīn	Field (7-31-90)
MC	Marriage customs	N		339	Mǎ Zìxiáng	Field (11-5-91)
MP	The magpie and the pheasant	F		85	Mǎ Kèxiáng	Field (7-11-90)
N1	Our customs and habits	N	60		Mǎ Zhōngshān	Bu He (1987)
N2	My own experience	N	132		Mǎ Zhōngshān	Bu He (1987)
T2	The witch	F	141		Unknown	Todaeva (1961)
T4	The wood gatherer	F	151		Unknown	Todaeva (1961)
T5	Ma Cheba	F	89		Unknown	Todaeva (1961)
T6	The dog and the cat	F	141		Unknown	Todaeva (1961)
T8	The vole and the zokor	F	29		Unknown	Todaeva (1961)

Table 2.1: Santa texts referred to in this dissertation

Examples in this work are referenced in the following manner. The capital letters and possibly number which precede the colon is the identification (ID) for the text given in Table 2.1 above. The number or numbers that immediately

follow the colon refer to the sentence or intonation unit (IU) number from the text.¹⁴ This tag immediately follows each sentence or intonation unit in the example, or it follows the last sentence or intonation unit. An example is given below.

- (9) “bi tʃi-ni bari-dʒi fuja-sə dʒiauliədʒi=dənə idʒiə=nə.” F06:47
 1SGNM 2SG-AC take-SS tie-DL hang.up=DQ eat=IMP
“After I catch and tie you up, I will hang you up, and then I will eat you.”

In (9) above, ‘F06’ is the ID for the folktale titled *The goat and the sheep* in Table 2.1 above. ‘47’ means that this example was the 47th sentence in this text. In addition to this, underlining and other devices are used to highlight specific items in the example.

The format of the published folktales and narratives in Bu He (1987) is interlinear style. The first line is Santa, transcribed using an adapted form of the International Phonetic Alphabet (IPA). The second line is a word-by-word translation using Script Mongolian. This writing system is not used by the Santa. Although it is still used in the Inner Mongolia Autonomous Region, Script Mongolian is unable to represent the Santa language satisfactorily. There are two reasons why this is so: 1) Script Mongolian spelling still represents the Middle Mongolian spelling. So even in the Inner Mongolia Autonomous Region, colloquial pronunciation and Script Mongolian vary greatly; 2) the Santa vocabulary has incorporated a large number of Chinese lexical items from Hui, the local northwestern Mandarin dialect spoken mainly by Chinese Muslims. These loan words are represented in Script Mongolian by the Mongolian equivalent given in parentheses. There are also a number of grammatical differences which cannot be satisfactorily represented. The Script Mongolian glossing is useful for historical/comparative study by those who are able to read

¹⁴ An *intonation unit* is a unit of speech that occurs in natural discourse that is unified by a single intonation contour.

Script Mongolian, but generally not for our purposes here. The third and final line is a free translation into Chinese.

The folktales from A Ibrahim (1987) have morpheme-by-morpheme glossing into Chinese as well as a free translation.

The folktales from Todaeva (1961) were transcribed using a transcription system based on Cyrillic. There is no morpheme-by-morpheme glossing, but there is a glossary which contains most of the words used in the texts. There is also a free translation of the each text into Russian.

The Santa language has no accepted written form. In other words, the Santa language is an oral language with no written tradition. The adapted IPA transcription used in the texts published in China would thus be incomprehensible to the average Santa speaker. Only those with specific training in this area would be able to read the published form of these texts.

In addition to the Santa data, data for Hui was also collected during my 1990 and 1991 field trips to Gansu. However, data collected by Charles N. Li on Hui that he has made available to me has proved invaluable.

2.5.2 Transcribing Santa: Phonetic, phonemic, and orthographic approaches

There is no written script in use for Santa today. Santa has never been a written language. Education in Dongxiang Autonomous County is carried out in Chinese, so any written communication is done in Chinese as well. A Ibrahim, a Santa linguist who studies the Santa language, introduced a written script in his 1984 manuscript, *An Alphabetic Script for Dongxiang*. But to the best of my knowledge, it has never had any widespread use.

2.5.2.1 The phonetic approach

There are three approaches I will use for transcribing Santa as a written language. The first approach is to transcribe the speech sounds phonetically using the International Phonetic Alphabet (IPA). This is valuable for phonetic detail and research, but in normal circumstances, the IPA is too detailed. Therefore, I will only use the phonetic IPA approach when phonetic detail is important. All

phonetic transcriptions will be contained in square-brackets '[''] unless otherwise noted.

2.5.2.2 The phonemic approach

The second approach I will use is a broader phonemic representation. In this approach phonetic (or predictable) detail is not transcribed, although the IPA is still used. Speech sounds in allophonic relationship to each other — in complementary distribution or in free variation — are represented by one abstract segment. This is a standard approach for transcribing an unwritten language where phonetic detail is unimportant. In addition, this representation of speech is believed to approximate more closely the speech sounds the speaker understands he or she is using. All phonemic transcriptions will be contained in slanted-brackets '/ '/' unless otherwise noted.

2.5.2.3 The orthographic approach

The third approach is orthographic. However, it should be noted that this approach is not strictly orthographic because it still uses the IPA symbols rather than a standard alphabet that one would find on a typewriter or a computer. This approach emphasizes readability, learnability, and phonemic distinctiveness to guide its development. Most of the Santa examples will be transcribed using the orthographic approach and will be unmarked as such. Within the discussion text, orthographic transcriptions will be underlined.

2.5.2.4 Some transcription problems

I will discuss two problems with transcription here: the problem of transcribing the stops and affricates and the problem of transcribing the glides.

2.5.2.4.1 *Transcribing the stops and affricates*

One of the chief difficulties one encounters when transcribing Santa is how to transcribe the stops and affricates. Phonetically in Santa, the distinction

between the two stop/affricate series is one of aspiration, not voicing. Thus we have an unaspirated series [p, t, k, q, ts, tʃ, tʂ] and an aspirated series [p^h, t^h, k^h, q^h, ts^h, tʃ^h, tʂ^h]. Phonemically, these series would be transcribed identically: /p, t, k, q, ts, tʃ, tʂ/ and /p^h, t^h, k^h, q^h, ts^h, tʃ^h, tʂ^h/. A problem arises here though of readability and recognizability if one uses a purely phonemic transcription system. This is mainly due to the influence of English where we would aspirate something we see as ‘p’ or ‘k’ (when they are actually unaspirated in this context). To avoid this, I will be using the orthographic system to transcribe the unaspirated series as b, d, g, q, dz, dʒ, dʒ and the aspirated series as p, t, k, q, ts, tʃ, tʂ. Thus, orthographically, the distinction is represented as a voicing distinction, but phonemically the distinction is actually one of aspiration. I believe this system facilitates readability. This approach agrees in style with many of the Chinese scholars who publish on Santa in China. In addition, this approach parallels *pinyin*, the romanization system used to transcribe Mandarin.

2.5.2.4.2 *Transcribing the glides*

The problem of transcribing the glides is more complicated. My analysis of the Santa and Chinese syllable claims that there are no complex vowel nuclei. (See section 4.2 for more on Santa syllable structure.) That means that if there is more than one [- consonantal] segment in the syllable, then only one can be [+ syllabic] and all others must be [- syllabic]. More plainly, these [- consonantal, - syllabic] segments must be on- or off-glides.

Phonetically, I will transcribe the bilabial central approximant as [ɸ] and the palatal central approximant as [j]. They function as glides and this phonetic representation emphasizes their [- consonantal, - syllabic] nature.¹⁵

Phonemically, I will transcribe the bilabial central approximant as /w/ and the palatal central approximant as /y/.

Orthographically, I will transcribe the bilabial central approximant as w when it is in the C₁ position and C₂ is null; at all other times ɸ will be used. I will

¹⁵ However, both of the central approximants have [+ consonantal] allophones that are fricativized.

transcribe the palatal central approximant as *y* when it is in the *C*₁ position and *C*₂ is null, at all other times *i* will be used.

I will be using *pinyin*, the accepted romanization system used in the People's Republic of China to represent Chinese.¹⁶ However, it should be understood that the dialect of Mandarin that is in contact with Santa is Hui, a northwestern dialect that only has three tones. I have made no attempt to reconcile the tonal or segmental differences between Hui and Mandarin in most of my discussion. For more on Hui see Li (1983, 1984, 1985, 1986).

2.5.2.5 The phonetic, phonemic, and orthographic transcription systems

As mentioned above, I will be using three different transcription systems — the phonetic, the phonemic, and the orthographic transcription systems — to represent Santa throughout this work. Table 2.2 on the following page is an equivalence table for the consonants. Table 2.3 is an equivalence table for the vowels, vowel+glide sequences, glide+vowel sequences, and glide+glide+vowel sequences.

¹⁶ I have not included an equivalence table for the pinyin symbols with the IPA here. See Li & Thompson (1988:3-9) or most any Chinese-English English-Chinese dictionary.

[Phonetic]	/Phonemic/	Orthographic
p ^h , p ^ɸ	p ^h	p
t ^h , t ^θ	t ^h	t
k ^h , k ^x	k ^h	k
q ^h , q ^χ	q ^h	q
p	p	b
t	t	d
k	k	g
q	q	g
ts ^h , s	ts ^h	ts
tɕ ^h	tɕ ^h	tɕ
tʂ ^h	tʂ ^h	tʂ
ts	ts	dz
tɕ	tɕ	dʒ
tʂ	tʂ	dʑ
f	f	f
s	s	s
ɸ	ɸ	ɸ
ʂ	ʂ	ʂ
x	x	x
h	h	h
ʐ	ʐ	ʐ
ʁ	ʁ	ʁ
m	m	m
n, m	n	n
ŋ, m, N	ŋ	ŋ
r, r	r	r
l	l	l
u, v	w	w, u
i, j	j	j, i

Table 2.2: The phonetic, phonemic, and orthographic equivalence table for consonants

[Phonetic]	/Phonemic/	Orthographic
i, ɪ, ɪ̥, i̥	i	i
u, u̥	u	u
ə, ɛ, ʔ, ə̥	ə	ə
ʊ	ʊ	ʊ
o, ^w o	o	o
ɑ, æ	ɑ	ɑ
ai̥, ɛi̥	aj	ai
au̥, ou̥	aw	au
əi̥	əj	əi
əu̥, ʔu̥	əw	əu
i̥ɑ	ja	ja, ia
u̥ɑ	wa	wa, ua
i̥ɛ	jə	jə, iə
i̥u	ju	ju, iu
i̥au̥, i̥ou̥	jaw	jau, iau
u̥ai̥, u̥ɛi̥	waj	wai, uai
u̥əi̥	wəj	wəi, uəi

Table 2.3: The phonetic, phonemic, and orthographic equivalence table for vowels, vowel+glide sequences, glide+vowel sequences, and glide+glide+vowel sequences

Chapter 3

Phonetics

3. Introduction

In this chapter, I will introduce the consonant and vowel inventories of Santa in section 3.1, discuss some general phonetic rules that occur in Santa in section 3.2, and finally, I will give an articulatory description of each segment in section 3.3.

3.1 Consonant and vowel inventory

The consonantal inventory of Santa consists of the following segments listed in Table 3.1.

	Bilabial	Labiodental	Alveolar	Retroflex	Alveolo-palatal	Palatal	Velar	Uvular	Glottal
Aspirated Stops	p ^h (p)		t ^h (t)				k ^h (k)	q ^h (q)	
Unaspirated Stops	p (b)		t (d)				k (g)	q (G)	
Aspirated Affricates			ts ^h (ts)	tʂ ^h (tʂ)	tɕ ^h (tɕ)				
Unaspirated			ts (dz)	tʂ (dz _ɿ)	tɕ (dʒ)				
Voiceless Fricatives		f	s	ʂ	ɕ		x		h
Voiced Fricatives				ʐ				ʁ	
Nasals	m		n				ŋ		
Trills			r						
Lateral Approximants			l						
Central	ʋ (w)					j (j)			

Table 3.1: Santa Consonant Inventory: Phonetic representation
(Orthographic representation in parentheses)¹⁷

The vowel inventory consists of the following segments listed in Table 3.2:

	Front	Central	Back [- round]	Back [+ round]
High	i		ɯ	u
Mid		ə ə̃		o
Low			ɑ	

Table 3.2: Santa Vowel Inventory
(Orthographic representation)

3.2 General phonetic rules and constraints

In this section, I will discuss some general phonetic rules and constraints that I have identified in Santa.

¹⁷ See section 2.5.2 for discussion of phonetic vs. phonetic vs. orthographic representation.

3.2.1 Affrication of aspirated stops

There is an optional rule in Santa where aspirated stops are affricated before high vowels. This affrication occurs at the same point of articulation as the stop closure, except for /t^h/, for which the affrication occurs at the dental point of articulation rather than the alveolar. This rule is loosely formalized in (1).

(1) /aspirated stop/ → [affricate]/__V [+ high]

Some examples are given below.

- | | | | |
|-----|--------|---------------|--|
| (2) | piɕiə | ‘belt’ | /p ^h iɕjə/ → [pɕ ^h i ^h ɕiə] |
| (3) | tʉŋqɑ | ‘chicken’ | /t ^h ʉŋqɑ/ → [tθ ^h ʉ ^h qɑ] |
| (4) | kidziə | ‘to lie down’ | /k ^h itɕjə/ → [kɕ ^h i ^h tɕiə] |
| (5) | quɔɔɔ | ‘knife’ | /q ^h uɔɔɔ/ → [qɕ ^h uɔɔɔ] |

Aspirated stops preceding non-high vowels are not affricated as shown below.

- | | | | |
|-----|---------|-------------|---|
| (6) | ta | ‘to guess’ | /t ^h ɑ/ → [t ^h ɑ] |
| (7) | korolon | ‘footprint’ | /k ^h orolon/ → [k ^h oro ^h lōŋ] |
| (8) | qaluŋ | ‘hot’ | /q ^h aluŋ/ → [q ^h ɑ ^h lūŋ] |

The amount and salience of the friction is variable depending on which segment it occurs after. The most salient presence of friction is found after /q^h/, /p^h/, and /t^h/, in that order from highest to lowest. The presence of friction after /k^h/ is the least salient, but it does occur.

The vowel is also voiceless in this environment. On one hand, the high vowel provides the environment for the affrication of aspirated stops. On the other hand, the affricated aspirated stop induces the devoicing of high vowels. See section 3.2.9 for more discussion on the devoicing of vowels.

The affrication of aspirated stops is an areal feature that can be found in other languages of the Gansu-Qinghai-Shaanxi region of China such as Minhe

Monguor (Keith W. Slater, personal communication) and the Hui northwestern Mandarin dialect of Linxia (Li 1984).

3.2.2 Fricativization of central approximants

There is an optional rule in Santa where both /j/ and /w/ are fricativized before vowels when they are syllable initial. This fricativization is most evident before high vowels, but it also occurs before mid and low vowels. This rule is loosely formalized in (9).

(9) /central approximant/ → [fricative]/\$__V

Some examples are given below.

(10) jibai ‘one hundred’ /jipaj/ → [ʃipeɪ]

(11) waila ‘to cry’ /wajla/ → [vɛiˈla]

This rule rarely applies before low back vowels as illustrated below.

(12) jara ‘wound’ /jara/ → [jaˈra]

(13) warada ‘to shout’ /warata/ → [waraˈta]

This rule is also an areal feature also found in Minhe Monguor (Keith W. Slater, personal communication) and Hui (Li 1984).

This fricativization rule has caused Chinese scholars to classify these sounds as fricatives rather than as approximants (Liu 1981, Bu 1986), but I have chosen to classify them as approximants because they pattern like glides and not like consonants in the syllable structure. See section 4.2 for more on Santa syllable structure.

3.2.3 Adjacent sonorants constraint

In mono-morphemic words of Mongolic origin in Santa, there is a constraint on adjacent sonorants across syllable boundaries. More specifically, if a nasal, /n/ or /ŋ/, is present in the syllable coda of the first syllable, the onset of the

following syllable cannot be a sonorant: /n/, /m/, /l/, /r/, /j/, or /w/. There are three exceptions to this constraint given below. These all involve nasal-lateral approximant sequences.

- | | |
|--------------|----------------------|
| (14) mǎŋləu | ‘forehead’ |
| (15) tǎŋləi | ‘palate’ |
| (16) tʂǎŋliə | ‘to listen, to hear’ |

This constraint does not apply when there is a glide in the coda as in (17) or when the word is of Chinese origin as in (18).

- | | | |
|-------------|----------|---|
| (17) ɡəira | ‘easy’ | /qəjra/ → [qəi'ra] |
| (18) zəŋmin | ‘people’ | (from Chinese <u>rénmín</u>) ¹⁸ |

3.2.4 Palatalization

There is an areal feature in the Gansu-Qinghai border region where alveolar stops are palatalized before /i/ or /j/.¹⁹ This applies to words of both Mongolic and Chinese origins. In example (19), Santa has tɕ (/tɕ^h/) where the other Mongolic languages have t (/t^h/). In example (20), Santa has dʒ (/tɕ/) where the others have d (/t/). This shows that Santa tɕ and dʒ in these examples were originally t and d respectively. There are many more examples like these.

¹⁸ Tonal markings on Chinese source words are from Mandarin, not the local Hui dialect which only has three tones. See Chapter 2 section 2.5.2 for more on this.

¹⁹ My impression is that this rule is still productive. Any new loans would undergo the same palatalization rule.

- (19) (Kuribayashi 1989:357)
- | | | |
|-----------|--------|--------|
| Script M. | temür | ‘iron’ |
| Mongolian | tomör | |
| Dagur | -- | |
| E. Yugur | təmər | |
| Monguor | təmur | |
| Baonan | təmər | |
| Santa | tçiəmu | |
- (20) (Kuribayashi 1989:213)
- | | | |
|-----------|-----------|--------|
| Script M. | degēsü(n) | ‘rope’ |
| Mongolian | dəəs | |
| Dagur | dəəs | |
| E. Yugur | diisən | |
| Monguor | deesə | |
| Baonan | desuŋ | |
| Santa | dziəsũŋ | |

Examples (21) and (22) show that in words of Chinese origin, t and d are also palatalized before /i/ and /j/.

- (21) tçiəntçi ‘weather’ (from Chinese tiānqì)
(22) dzidzũ ‘host, landlord’ (from Chinese đīzhǔ)

3.2.5 Insertion of syllable onset /n/

There are a number of Chinese loans in Santa where /n/ has been inserted in the syllable onset where previously there was no onset. Just a few of these are listed below.

- (23) naiji ‘to love, to like, to be fond of’ (from Chinese ài)
(24) naŋbaŋ ‘kneading board’ (from Chinese ànbǎn)
(25) baunən giə ‘to pay a debt of gratitude’ (from Chinese bào’ēn)

There appears to be a constraint on words borrowed from Chinese which have no onsets and begin with either /ɑ/ or /ə/. There is only one exception given

in (26), but even for this, there is another borrowing for which there is an /n/ in the onset, given in (27).

- | | |
|--------------|--|
| (26) antəu | ‘saddle’ (from Chinese <u>āntóu</u>) |
| (27) naŋdzəŋ | ‘saddle’ (from Chinese <u>ānchàn</u>) |

This constraint is not confined to Santa. It can be found in Baonan as well where the appellation baunan is derived from Chinese bǎo’ān.

3.2.6 Homorganic nasal-stop constraint

In mono-morphemic words of Mongolic origin, there is a constraint where if a syllable-initial stop or affricate is preceded by a nasal, then this nasal must be homorganic. There are four instances where this constraint does not hold: two examples of stops in (28) and (29) and two examples of affricates in (30) and (31). Example (31) has an alternative pronunciation where the preceding nasal is homorganic.

- | | |
|------------------------|--|
| (28) maŋta | ‘to dig, to excavate’ |
| (29) miəngu | ‘silver’ |
| (30) jaŋtʂi | ‘to thresh grain (on the threshing floor)’ |
| (31) gaŋdzʊŋ ~ gandzʊŋ | ‘sleeve’ |

A possible explanation for these counterexamples is that these words were not originally mono-morphemic and have since been grammaticalized as such.

This constraint also applies to nasal-bilabial stop sequences. In (32) a bilabial nasal occurs in the syllable coda at the phonetic level. (Bilabial nasal/stop sequences are not allowed at the phonemic level. See section 4.2 for more on Santa syllable structure.) One can also find examples of this constraint applying to words of Chinese origin, as in (33).

- | | | |
|--------------------------------|-----------------------|------------------------------|
| (32) unbərə | ‘to sink, to subside’ | /unpərə/ → [ūmpə'rə] |
| (33) dzʊnbi giə | ‘to get ready’ | /tʂʊnpi kjə/ → [tʂūm'pi kʲɛ] |
| (from Chinese <u>zhǔnbèi</u>) | | |

In nasal-uvular stop sequences, the nasal is uvular as in (34), even though this segment isn't present in the Santa consonantal inventory.

- (34) *suŋgu* 'to choose, to opt, to select' /*suŋqu*/ → [*sũN'qu*]

In some rare instances, when the nasal is followed by a bilabial stop, it is difficult to determine if the segment is an /*n*/ or an /*ŋ*/ at the phonemic level as in the example below.

- (35) *nanpaŋ guki* 'a type of insect'
/nanpaŋ quki/ → [*nām'pāŋ qu'ki*] unknown source/Santa

3.2.7 Deletion of nasal codas and vowel nasalization

There is an areal feature in the Gansu-Qinghai border region where nasal codas are routinely deleted. Vowels are normally nasalized when they precede a nasal in Santa. When the nasal coda is deleted, a nasalized vowel is left behind: *vn* > *ṽn* > *ṽ*. Some examples are given below.

- (36) *tʂusuŋ* 'blood' /*tʂ^husuŋ*/ → [*tʂ^hu'sũ*]
(37) *oliən* 'cloud' /*oljən*/ → [*ʷo'liẽ*]
(38) *tʂiGaŋ* 'white' /*tʂ^hiGaŋ*/ → [*tʂ^hi'qā*]

This rule is not restricted to word-final nasals, as can be seen in (39). But the frequency of the rule applying in non-word-final situations is much less. This is probably due to consonantal onsets in the following syllable which seem to influence the presence of the nasal.

- (39) *dʒiənji* 'proposal, recommendation' /*tɕjənji*/ → [*tɕiẽ'ji*]

The deletion of nasal codas results in the neutralization of the alveolar-velar nasal distinction in the coda. But this distinction is not lost when the vowel is /*ɑ*/. This is because /*ɑ*/ has an [æ] variant which occurs before alveolar nasals and an [a] variant which occurs before velar nasals. In these cases, when the nasal is deleted, a distinction is still made in the vowels, as the minimal

pair in examples (40) and (41) shows. This rule may eventually lead to the phonemicization of [æ], but since the deletion of the nasal coda is optional, I do not consider the phonetic variants [ã] and [æ] to contrast at the phonemic level yet.

- | | | | |
|------|-----|-------------------------------------|--------------|
| (40) | dan | ‘carrying pole and the loads on it’ | /tan/ → [tã] |
| (41) | daŋ | ‘political party’ | /taŋ/ → [tã] |

3.2.8 Anticipatory vowel and nasal assimilation

In fast speech, when two vowels are adjacent to each other across syllable boundaries and within the same intonation unit, the first vowel assimilates to the quality of the second vowel. The timing remains basically the same or is perhaps slightly shorter in duration than if there were two full vowels. This is illustrated in (42). The /i/ of mori ‘horse’ has assimilated to [u]. The stress pattern remains unchanged with ultimate stress falling on the last syllable of mori ‘horse’, even though the quality of the vowel of the final syllable has changed.

- | | | | | | |
|------|-----------------------------|-------|----------|---|-------------------|
| (42) | jau | mori | unu-dzi | | MC:121 |
| | /jaw | mori | unu-tʃi/ | → | [jou mo'ruɲu,tʃi] |
| | want | horse | ride-SS | | |
| | <i>want to ride a horse</i> | | | | |

I have also encountered instances of assimilation of a coda nasal with the following vowel as well, as in (43). This is not uncommon. In this case, the nasal takes on all the features of the following vowel, but retains its [+nasal] feature so that the vowel is nasalized. Again, timing and stress assignment remains basically the same. In (43), the syllable coda nasal of axuŋ ‘imam’ assimilates to the following vowel and becomes [ã].

- | | | | | | |
|------|-------------------------------|---------|--------|---|----------------------|
| (43) | axuŋ | asa-dzi | balu | | MC:186 |
| | /axuŋ | asa-tʃi | palu/ | → | [a'xũã:sa'tʃi pa'lu] |
| | imam | ask-SS | finish | | |
| | <i>finish asking the imam</i> | | | | |

3.2.9 Devoicing of vowels

In Santa, simple high vowels, /i/, /u/, or /ʉ/, are voiceless when they occur between voiceless segments in an initial unstressed syllable. Some examples are given below.

- | | | |
|-------------|--------------------------------|------------------------|
| (44) qʉdun | ‘hard, stiff, tough’ | /qʰʉtʉn/ → [qχʰʉtʉn] |
| (45) tʃigəŋ | ‘ear’ | /tʃʰiqəŋ/ → [tʃʰɿ'qəŋ] |
| (46) sidara | ‘to catch fire, to be on fire’ | /sitara/ → [sɿta'ra] |

Examples (47) and (48) shows that the vowel is not voiceless if it precedes a voiced segment. This rule is obligatory in words of Mongolic origin.

- | | | |
|------------|--------------------------------|----------------------|
| (47) tʃila | ‘to be weary, to be exhausted’ | /tʃʰila/ → [tʃʰɿ'la] |
| (48) suma | ‘arrow’ | /suma/ → [su'ma] |

There are also examples of the mid central vowel /ə/ being voiceless as well, as in (49).

- | | | |
|-----------|----------------|--------------------|
| (49) pesə | ‘again, still’ | /pʰəsə/ → [pʰɿ'sɛ] |
|-----------|----------------|--------------------|

This rule may also apply to words of Chinese origin as in (50), but the application of the rule is optional.

- | | | |
|--------------|---------------------|--------------------------|
| (50) tʃuguəi | ‘cupboard, cabinet’ | /tʃʰukwəj/ → [tʃʰɿ'kuəi] |
|--------------|---------------------|--------------------------|

In addition, there are numerous instances of voiceless /i/ following /s/ in non-word-initial syllables as in (51) and (52). However, not all instances of /i/ following /s/ are voiceless as in (53).

- | | | |
|---------------|------------|-----------------------------|
| (51) 'basi | ‘tiger’ | /pasi/ → [pasɿ] |
| (52) kəwasila | ‘children’ | /kʰəwasila/ → [kʰə'wasɿ'la] |
| (53) bositu | ‘pregnant’ | /positʰu/ → [pʰosi'tʰu] |

3.3 Articulatory description of the consonants and vowels

The Santa consonants will be described in section 3.3.1 in terms of voicing, aspiration, place of articulation, and manner of articulation. Recognized variations (allophones) of the basic consonantal segments will also be described.

The Santa vowels will be described in section 3.3.2 in terms of vowel height, frontness/backness, rhoticization (if present), and rounding. Recognized variations (allophones) of the basic vocalic segments will also be described.

Santa ‘diphthongs’ and ‘triphthongs’ will be described in section 3.3.3.

3.3.1 The Santa consonants

There are 29 basic consonantal segments in the Santa consonantal inventory. Phonemically, they are: /p^h, t^h, k^h, q^h, p, t, k, q, ts^h, tɕ^h, tɕ^h, ts, tɕ, tɕ, f, s, ɸ, ɕ, x, h, z, ʁ, m, n, ŋ, r, l, w, j/.

3.3.1.1 /p^h/ = [p^h, pɸ^h]

/p^h/ is a voiceless aspirated bilabial stop. Before high vowels, this phoneme tends to be realized as [pɸ^h], rather than [p^h]. See section 3.2.1 for more on the affrication of aspirated stops.

(54) pəsə ‘again, still’ /p^həsə/

(55) piɕiə ‘belt’ /p^hiɕjə/ → [pɸ^hi'ɕjɛ]

3.3.1.2 /t^h/ = [t^h, tθ^h]

/t^h/ is a voiceless aspirated alveolar stop. Before high vowels, this phoneme tends to be realized as [tθ^h], rather than [t^h], as in example (57). However, the affrication is more salient before [ɹ] than before [u].

(56) tɛija ‘walking stick’ /t^hɛjja/

(57) tuɣa ‘chicken’ /tuɣa/ → [tθ^hɹ'qɑ]

3.3.1.3 /k^h/ = [k^h, kx^h]

/k^h/ is a voiceless aspirated velar stop. The presence of [kx^h] before high vowels is not very salient, but it does occur as in (59).

- (58) kəwəŋ ‘boy, son’ /k^həwəŋ/
 (59) kidzɪə ‘to lie down, to recline’ /kitɕə/ → [kx^hi'tɕiɛ]

3.3.1.4 /q^h/ = [q^h, qχ^h]

/q^h/ is a voiceless aspirated uvular stop. Before high vowels, this phoneme tends to be realized as [qχ^h] rather than [q^h]. The affrication is very salient.

- (60) qa ‘hand’ /q^ha/
 (61) qudoɤo ‘knife’ /q^hutoɤo/ → [qχ^huto'ɤo]

3.3.1.5 /p/ = [p]

/p/ is a voiceless unaspirated bilabial stop.

- (62) baŋ ‘honey’ /paŋ/

3.3.1.6 /t/ = [t]

/t/ is a voiceless unaspirated alveolar stop.

- (63) daləu ‘shoulder’ /taləw/

3.3.1.7 /k/ = [k]

/k/ is a voiceless unaspirated velar stop.

- (64) giədun ‘a few, several, some’ /kjətun/

3.3.1.8 /q/ = [q]

/q/ is a voiceless unaspirated uvular stop.

- (65) Goləi ‘throat, larynx’ /qoləj/

3.3.1.9 /ts^h/ = [ts^h, s]

/ts^h/ is a voiceless aspirated alveolar affricate. Not indigenous to Mongolic, it is found only in words of Chinese origin. It is often in free variation with the voiceless alveolar fricative [s], which *is* indigenous to Santa.

- (66) tsai ~ sai ‘vegetable, greens’ /ts^haj/
(from Chinese cái)

3.3.1.10 /tɕ^h/ = [tɕ^h]

/tɕ^h/ is a voiceless aspirated alveolo-palatal affricate.

- (67) tɕiəman ‘stone mill’ /tɕ^hjəman/

3.3.1.11 /tʂ^h/ = [tʂ^h]

/tʂ^h/ is a voiceless aspirated retroflex affricate.

- (68) tʂanliə ‘to hear, to listen’ /tʂ^hanljə/

3.3.1.12 /ts/ = [ts]

/ts/ is a voiceless unaspirated alveolar affricate. It is not found in words of Mongolic origin, but in words borrowed from Chinese and Persian.

- (69) dzəmi ~ dzəmiŋ ‘the earth, the globe’ /tsəmi/
from Persian

3.3.1.13 /tɕ/ = [tɕ]

/tɕ/ is a voiceless unaspirated alveolo-palatal affricate.

- (70) dɕiərə ‘on, above, over, on the surface of’ /tɕjərə/

3.3.1.14 /tʂ/ = [tʂ]

/tʂ/ is a voiceless unaspirated retroflex affricate.

(71) dzakasun ‘fish’ /tʃakasun/

3.3.1.15 /f/ = [f]

/f/ is a voiceless labiodental fricative.

(72) funjəkən ‘fox’ /funjəkən/

3.3.1.16 /s/ = [s]

/s/ is a voiceless alveolar fricative.

(73) samu ‘turnip, white vegetable’ /samu/

3.3.1.17 /ç/ = [ç]

/ç/ is a voiceless alveolo-palatal fricative.

(74) çəni ‘night, evening’ /çəni/

3.3.1.18 /ʃ/ = [ʃ]

/ʃ/ is a voiceless retroflex fricative.

(75) ʃəwra ‘earth, land, soil’ /ʃəwra/

3.3.1.19 /x/ = [x]

/x/ is a voiceless velar fricative.

(76) xodəu ‘maggot’ /xotəw/

3.3.1.20 /h/ = [h]

/h/ is a voiceless glottal fricative.

(77) həbuxi ‘butterfly’ /həbuxi/

3.3.1.21 $/z/ = [z]$

/ʒ/ is a voiced retroflex fricative. It is not found in words of Mongolic origin, but rather in words of Chinese and Arabic origin.

(78) zəŋsəŋ ‘ginseng’ /zəŋsəŋ/
from Chinese rénshēn

3.3.1.22 /ɤ/ = [ɤ]

/ɣ/ is voiced uvular fricative. In fast speech, /ɣ/ is often a voiced uvular approximant rather than a fricative. The voiced uvular fricative and the voiced uvular approximant are represented by the same symbol in the IPA.

(79) nokon 'green' /nokon/

3.3.1.23 /m/ = [m]

/m/ is a voiced bilabial nasal.

(80) *mutun* ‘tree, wood, lumber’ /mut^hun/

3.3.1.24 /n/ = [n, m]

/n/ is a voiced alveolar nasal. Before labials, /n/ is often realized as [m] as in (82).

(81) nuduŋ	'eye'	/nutuŋ/
(82) unba	'to swim'	/unpa/ → [ũm'pa]

3.3.1.25 /ŋ/ = [ŋ, N, m]

/ŋ/ is a voiced velar nasal. Before uvulars, this phoneme is realized as [ŋ] as in example (84). Before labials, /ŋ/ is often realized as [m] as in (85).

(83) maŋ	'all'	/maŋ/
(84) dzaŋga	'walnut'	/tʂaŋqa/ → [tʂān'qa]
(85) baŋbaŋ	'club, stick'	/paŋpaŋ/ → [pām'pāŋ]

(from Chinese bàngbang)

3.3.1.26 /r/ = [r, ɾ]

/r/ is a voiced alveolar trill. The length of the trill varies according to speed of speech. In fast speech, a voiced alveolar flap [ɾ] is often encountered.

(86) suru ‘to learn, to study’ /suru/

3.3.1.27 /l/ = [l]

/l/ is a voiced alveolar lateral approximant.

(87) lausa ‘mule’ /lawsa/

3.3.1.28 /w/ = [ʋ, v]

/w/ is a voiced labial-velar central approximant. Especially before high vowels and front vowels, this phoneme tends to be realized as a voiced labiodental fricative [v] rather than [ʋ], but one can also find it preceding low back vowels as in (90).

(88) wo	‘COPULA’	/wo/ → [ʋo]
(89) wəliə	‘work, labor’	/wəjliə/ → [vəɿ'liɛ]
(90) wəɕa	‘to wash’	/wəɕa/ → [və'ɕa]

3.3.1.29 /j/ = [j, ɟ]

/j/ is a voiced palatal central approximant. Before high vowels, this phoneme tends to be realized as a voiced palatal fricative [ɟ] rather than [j] as in (92).

(91) jaŋ	‘what’	/jaŋ/
(92) jibai	‘one hundred’	/jibaj/ → [ɟipeɿ]

from Chinese yībǎi

3.3.2 The Santa vowels

There are 7 basic vocalic segments in Santa. Phonemically, they are: ɨ , ɯ , u , ə , ɤ , o , ɑ . Phonetic variants will be discussed for each vowel when relevant. For discussion of voiceless variants see section 3.2.9 above.

3.3.2.1 /i/ = [ɨ, ɪ, ɪ,]

/i/ is a high front unrounded vowel. After the retroflex obstruents tʂ^h /, tʂ /, ʂ /, and ʐ]/ the retroflex apical vowel [ɨ] is found as in (94). After the alveolar obstruents ts^h /, ts /, and s / the dental apical vowel [ɪ] is found as in (95).²⁰ [i] does not occur after t^h /, t /, q^h /, f /, x /, and h /. After all other consonants [i] is found as in (93).

(93) bi	‘I, 1ST SINGULAR PRONOUN’	/pi/ → [pi]
(94) tʂi	‘YOU, 2ND SINGULAR PRONOUN’	/tʂ ^h i/ → [tʂ ^h ɨ]
(95) misi	‘to fly’	/misi/ → [mi ^ɪ sɪ]

3.3.2.2 /ɯ/ = [ɯ]

/ɯ/ is a high back unrounded vowel. This vowel is only found after p^h /, t^h /, k^h /, q^h /, q /, and ɣ /. Some examples are given below.

(96) qɯgəɪ	‘pig, swine’	/q ^h ɯqəj/
(97) əɣɯ	‘to beat, to strike’	/əɣɯ/

3.3.2.3 /u/ = [u]

[u] is a high back rounded vowel.

(98) dzuwa	‘to mix, to stir, to blend’	/tʂuwa/
------------	-----------------------------	---------

²⁰ The phonetic descriptions of [ɨ] and [ɪ] are based on Chao (1968: xxiii). The phonetic symbols that he uses, however, are slightly different. Although these vowels occur in both indigenous words and borrowings, the quality of these vowels and their restricted distribution is most certainly influenced by Chinese.

3.3.2.4 /ə/ = [ə, ɛ, ʌ]

/ə/ is a mid central unrounded vowel. In stressed syllables that do not precede the velar nasal /ŋ/, this phoneme tends to be realized as a mid front unrounded vowel close to [ɛ] as in (99). In unstressed syllables [ə] is normally found as in (99). After the glide [j] one also finds [ɛ] as in (100). In stressed syllables preceding [ŋ], one finds a mid back unrounded vowel close to [ʌ] as in (101).

(99)	əndzəkə	‘donkey’	/əntʂəkə/ → [əntʂə'kɛ]
(100)	niə	‘one’	/njə/ → [njɛ]
(101)	aməŋ	‘rice; broom corn millet’	/aməŋ/ → [a'mʌŋ]

3.3.2.5 /ɜ/ = [ɜ]

/ɜ/ is a mid central unrounded rhoticized vowel. /ɜ/ is always syllabified as its own syllable never co-occurring with an onset or a coda. There is one exception to this, in (104), which is an Arabic borrowing which has /h/ in the onset.

(102)	tɕiɜgə	‘vehicle’	/tɕ ^h iɜkə/ → [tɕ ^h i.ɜ.kə]
(103)	ɜʂi	‘twenty’	/ɜʂi/ → [ɜ.ʂɪ]
(104)	zɪhɜ	‘soul, spirit’	/zɪhɜ/ → [zɪ.hɜ]

3.3.2.6 /o/ = [o, ʷo]

/o/ is a mid back rounded vowel. /o/ is often produced with a great deal of labialization as [ʷo]. However, the degree of labialization at any given time is inconsistent.

(105)	oŋqono	‘to shout’	/oŋqono/ → [ōNqō'no]
(106)	oliən	‘cloud’	/oljən/ → [ʷo'liɛn]
(107)	bolu	‘to cook’	/polu/ → [pʷo'lu]

3.3.2.7 /ɑ/ = [ɑ, æ]

/ɑ/ is a low back unrounded vowel. Before the voiced alveolar nasal /n/, this phoneme is realized as a vowel approaching a low mid or low front unrounded vowel [æ], while [ɑ] is realized before the voiced velar nasal /ŋ/. These are illustrated below. See section 3.2.7 above for discussion on nasal coda deletion and the possible phonemicization of [ã] and [æ̃].

(108)	apa	‘barley’	/ap ^h ɑ/
(109)	dan	‘carrying pole and the loads on it’	/tan/ → [tæ̃n]
(110)	daŋ	‘political party’	/taŋ/ → [tãŋ]

3.3.3 Santa vowel+glide and glide+vowel sequences

There are no instances of complex vowels in Santa syllable nuclei. In other words, contiguous vowels do not exist in the syllable nucleus. See section 4.2 for more on Santa syllable structure.

However, the Santa vowels /ɑ/, /ə/, and /u/ occur with pre-vocalic and post-vocalic glides and sometimes both.²¹

3.3.3.1 Vowel+glide sequences

The vowel+glide sequences are /ɑj, əw, əj, əw/. Phonetically, the vowels in the vowel+glide sequences /ɑj/, /əw/ and /əj/ are raised before the glides. The vowel in the glide /əw/ is retracted. There seems to be a general phonetic principle present here where the vowel’s place of articulation is influenced by the place of articulation of the following glide resulting in the raising of the vowel in the former three instances and the retracting of the vowel in the latter instance.

²¹ I have included this section because most Chinese sources include a discussion section on diphthongs and triphthongs, although according to my analysis, Santa does not technically have diphthongs or triphthongs but combinations of glides and vowels.

3.3.3.1.1 /aj/ = [aᵢ, ɛᵢ]

Phonetically, the vowel of /aj/ is often raised so that it falls somewhere between [aᵢ] and [ɛᵢ] as in (111).

(111) bai ‘to stop, to stand’ /paj/ → [pɛᵢ]

3.3.3.1.2 /aw/ = [aᵤ, ou]

Phonetically, the vowel of /aw/ is often raised so that it falls somewhere between [aᵤ] and [ou] as in (112).

(112) nau ‘to hit the mark’ /naw/ → [nou]

3.3.3.1.3 /əj/ = [əᵢ]

Phonetically, the vowel of /əj/ is often raised so that it falls somewhere between [əᵢ] and [i] as in (113).

(113) qawgəi ‘pig, swine’ /qʰawqəj/ → [qʰɥ'qəᵢ]

3.3.3.1.4 /əw/ = [əᵤ, ɤᵤ]

Phonetically, the vowel of /əw/ is often retracted so that it falls somewhere between [əᵤ] and [ɤᵤ] as in (114).

(114) xodəu ‘maggot’ /xotəw/ → [xʷo'tɤᵤ]

3.3.3.2 Glide+vowel sequences

The glide+vowel sequences are /ja, wa, jə, ju/.

3.3.3.2.1 /ja/ = [ja]

Phonetically, /ja/ is [ja] as in (115).

(115) nia ‘to glue, to stick’ /nja/ → [nᵢa]

3.3.3.2.2 /wa/ = [u̥a]

Phonetically, /wa/ is [u̥a] as in (116).

(116) gua 'two' /qwa/ → [qu̥a]

3.3.3.2.3 /jə/ = [i̯ɛ]

Phonetically, /jə/ is [i̯ɛ] as in (117).

(117) biəri 'wife, daughter-in-law' /pjəri/ → [pi̯ɛ'ri]

3.3.3.2.4 /ju/ = [i̯u]

Phonetically, /ju/ is [i̯u] as in (118).

(118) niu 'to hide' /nju/ → [ni̯u]

3.3.3.3 Glide+vowel+glide sequences

The glide+vowel+glide sequences are /jaw, waj, wəj/. As with the vowel+glide sequences, the vowels in the glide+vowel+glide sequences are usually raised before the following glide.

3.3.3.3.1 /jaw/ = [ia̯u̯, iou̯]

Phonetically, the vowel of /jaw/ is often raised so that it falls somewhere between [ia̯u̯] and [iou̯] as in (119).

(119) otɕiau 'old' /otɕ^hjaw/ → [ʷo'tɕ^hiou̯]

3.3.3.3.2 /waj/ = [u̯a̯i̯, u̯ɛ̯i̯]

Phonetically, the vowel of /waj/ is often raised so that it falls somewhere between [u̯a̯i̯] and [u̯ɛ̯i̯] as in (120).

(120) kuaisun̩ 'navel' /k^hwajsun̩/ → [k^hu̯ɛ̯i̯'sū̯n̩]

3.3.3.3.3 /wəj/ = [ɥəi]

Phonetically, the vowel of /wəj/ is often raised so that it falls somewhere between [ɥəi] and [ɥi] as in (121).

(121) Guəilu ‘to become, to turn into’ /qwəjlu/ → [quəi'lu]

Chapter 4

Phonology

4. Introduction

In this chapter, I will be looking at some features of the Santa phonological system. These include a distributional description of the Santa phonemes in section 4.1; Santa syllable structure and syllable inventories in section 4.2; stress in section 4.3; the lack of productive vowel harmony in section 4.4; the lack of long vowels in section 4.5; and the retroflex series of consonants in section 4.6.

4.1 Distributional description of the Santa phonemes and the influence of language contact

In this section I will i) give a distributional description of each phoneme; and ii) discuss how language contact has affected its distribution. The distribution is illuminating because it reflects what happens when two typologically different phonological systems — Mongolic and Chinese — meet, so to speak, in one language, a situation that has been brought about by intense language contact.

For more detail on Hui and its influence on Santa, see section 2.3.2 above, section 4.2, Chapter 6, and Field (1991, 1993).

4.1.1 Relevant distributional environments and Santa syllable structure

The following is a list of relevant distributional environments with respect to the Santa phonemes: a) source language: Mongolic vs. non-Mongolic; b) syllable periphery: onset or coda; c) word-initial; d) after vowels; e) after nasals; f) after glides; g) before glides; h) presence of a morpheme boundary; and i) stressed or unstressed syllables. I will briefly discuss each environment, but first it is

necessary to give a brief description of Santa syllable structure. For a more detailed discussion of Santa syllable structure, see section 4.2.

One version of the Santa maximal syllable template is given in (1).

- (1) Santa maximal syllable template (A)
 $(C_1)(C_2)V_1(C_3)$
 $C_1 \neq \eta, j, w$
 $C_2 = j, w$
 $C_3 = n, \eta, j, w, (r)$

Consonant clusters are allowed in the syllable onset, but of a very limited type: C_2 must be a glide, either /w/ or /j/ and C_1 must not be /w/, /j/, or /η/.

Consonant clusters are not allowed in the syllable coda. Only the nasals /n/ and /η/, or the glides /w/ and /j/, or occasionally /r/ may occur in the coda.

Another representation of the Santa maximal syllable template is presented in (2).

- (2) Santa maximal syllable template (B)²²

$$(C)(G)V(\left\{ \begin{matrix} G \\ N \end{matrix} \right\})$$

$C = [+ \text{consonantal}]$, $G = [- \text{consonantal}, - \text{syllabic}]$,

$V = [+ \text{syllabic}]$, $N = [+ \text{nasal}]$

To summarize (1) and (2) above, C_2 must be a glide (G) and C_3 must be a glide (G) or a nasal (N).

²² The phoneme /r/ has not been included in this representation because of its very peripheral nature. For more on this see sections 4.1.2.5.4 and 4.2.

4.1.1.1 Source language: Mongolic vs. non-Mongolic

This is not a phonological environment. However, the heavy influence of language contact on Santa has caused phoneme distribution to be radically affected by the source language of a given lexical item. Therefore, some phonemes may have a limited distribution in words of Mongolic origin; for example, the phoneme /p^h/ which only occurs word-initially in words of Mongolic origin. But in words of Chinese origin, the phoneme /p^h/ has a more general distribution. It occurs in the syllable onset, therefore it may occur after vowels, nasals, and glides as well as word-initially. Therefore, it is important to distinguish the source language of the word in question when discussing phoneme distribution.²³

4.1.1.2 Syllable periphery: onset or coda

The syllable onset environment is the most general of the phonological environments discussed here. If a phoneme can occur without restriction in the syllable onset, then it logically follows that it will a) occur word-initially (see section 4.1.1.3); b) occur after vowels (see section 4.1.1.4); c) occur after nasals (see section 4.1.1.5); after glides (see section 4.1.1.6); and before glides (see section 4.1.1.7). This follows from Santa syllable structure which allows only nasals or glides in the syllable coda. Because there are only consonant clusters of a very limited type in Santa (Consonant-Glide), then any consonant that occurs in the C₁ position in the syllable onset must be word-initial, follow the previous syllable's vowel nucleus, or follow the previous syllable's nasal or glide coda. Some examples of phonemes that occur in the syllable onset environment are /p/, /t/, and /k/.

In addition to this, it also logically follows that any consonant that occurs in the C₁ position in the syllable onset will precede glides in the C₂ position. It

²³ The language consultants that I had the privilege of working with were quite aware if a particular lexical item was a Chinese loan or not. However, all of the education of the Santa is conducted in Chinese.

turns out that this environment is more limited. For instance, /p/ rarely precedes glides in words of Mongolic origin.

The syllable coda environment is very restricted in Santa. Only the nasals /n/, /ŋ/, the glides /y/ and /w/, and occasionally /r/ can occur in the syllable coda.

4.1.1.3 Word-initial

There are a number of instances of phonemes in words of Mongolic origin which only or primarily occur in word-initial position. These are /p^h/, /q^h/, /f/, /x/ and /h/. This is more restricted than the syllable onset environment because any phoneme that occurs exclusively in the word-initial position will not occur after vowels, nasals, or glides.

There are some phonemes that occur in the word-initial position and in combination with some other environment. In these cases, the phoneme in question has a more general distribution than just the word-initial environment, but the distribution is more restricted than the syllable onset environment. An example of this is the phoneme /ç/ in words of Mongolic origin which occurs in the word-initial position and after vowels, but not after nasals or glides.

4.1.1.4 After vowels

There are no phonemes in Santa that occur only after vowels. There is one phoneme in Santa that only occurs after vowels or glides: /r/. There is one phoneme that only occurs after vowels or after nasals: /ɣ/. Some phonemes that occur in the word-initial position and after vowels in words of Mongolic origin are /tɕ^h/, /ç/, /ʂ/ and /m/.

4.1.1.5 After nasals

There are no phonemes in Santa that occur only after nasals. There is one phoneme that occurs only after vowels or nasals: /ɣ/.

4.1.1.6 After glides

There are no phonemes in Santa that occur only after glides. There is one phoneme in Santa that occurs only after vowels or glides: /r/.

4.1.1.7 Before glides

There are no phonemes in Santa that occur only before glides. But /tɕ^h/, /tɕ/, and /ɕ/ only occur before /j/ or [i].

There are some phonemes that occur only before /j/ glides, but not /w/ glides, for instance, /tɕ^h/, /tɕ/, and /ɕ/.

And there are some phonemes that occur only before /w/ glides, but not before /j/ glides in words of Chinese origin, for instance, /tɕ^h/, /tɕ/, /s/, and /x/.

There are many phonemes that do not occur before glides in words of Mongolic origin, for instance, /p^h/, /t^h/, /f/, and /tɕ^h/.

4.1.1.8 Presence of a morpheme boundary

Morpheme boundaries play an important role in the distribution of phonemes. Across morpheme boundaries, one may find sequences of phonemes that do not occur in mono-morphemic words. For instance, /t/ cannot follow /ŋ/ in mono-morphemic words of Mongolic origin, but if there is a morpheme boundary after /ŋ/, then a /t/ may follow.

4.1.1.9 Stressed or unstressed syllables

Stress is relevant only for the distribution of vowels. For instance, voiceless vowels may only occur in unstressed syllables. See section 3.2.9 for more discussion on the devoicing of vowels.

4.1.2 The consonant phonemes

There are 29 consonant phonemes in Santa: /p^h, t^h, k^h, q^h, p, t, k, q, ts^h, tɕ^h, ts^h, ts, tɕ, ts, f, s, ɕ, ʂ, x, h, ʈ, ɮ, m, n, ŋ, r, l, w, j/.

4.1.2.1 Stops

In this section I will cover the aspirated stops /p^h/, /t^h/, /k^h/, and /q^h/ (orthophonemically p, t, k, q) and the unaspirated stops /p/, /t/, /k/, and /q/ (orthophonemically b, d, g, g). Nasals preceding stops in words of Mongolic origin are usually homorganic. For more on this see section 3.2.6 above on the homorganic nasal-stop constraint.

4.1.2.1.1 The phoneme /p^h/ = p

i) The phoneme /p^h/ only occurs word-initially in the C₁ position in words of Mongolic origin, as in example (3). Therefore it does not occur after vowels, nasals or glides, or in the syllable coda. Moreover, /p^h/ does not occur before glides.

- (3) pudza ‘bean, pea’

There is only one example of /p^h/ occurring after a vowel in a mono-morphemic word of Mongolic origin. This is given in (4).

- (4) apa ‘barley’
(5) lapa dzasuŋ ‘snowflake’

There is also lapa dzasuŋ ‘snowflake’, but the first word lapa is of unknown origin.²⁴ dzasuŋ ‘snow’ is of Mongolic origin.

There are two examples of /p^h/ occurring after vowels in words of Mongolic origin that are not mono-morphemic. These are given in (6) and (7).

- (6) xupalakaŋ ~ xupulakaŋ ‘very red’
(7) şiparakaŋ ~ şipurakaŋ ‘yellow-orange’

²⁴ Bu (1983) gives the source language, when known, of all the entries. There are a number of words, however, where the origin is unclear or unknown.

Interestingly enough, these words seem to make use of an infix -pa- ~ -pu- as well as the suffix -kaŋ. The unaffixed forms of these words are given in (8) and (9).

- | | | |
|-----|-------|----------|
| (8) | xulaŋ | ‘red’ |
| (9) | şıra | ‘yellow’ |

The infix is inserted after the first syllable (or before the final syllable) in each case. At this time it is unclear to me whether the change in meaning from ‘red’ to ‘very red’ and from ‘yellow’ to ‘yellow-orange’ is a result of just one or a combination of both affixes, but one of the functions of -kaŋ is an intensifier when used with an adjective, as in example (10).

- | | | |
|------|---------|--|
| (10) | udaŋkaŋ | ‘slower’ (from udaŋ ‘slow’ + <u>-kaŋ</u>) |
|------|---------|--|

There is no comparative evidence to support the hypothesis that the infix -pa- ~ -pu- is an archaic remnant of the root. However, the Script Mongolian (Middle Mongolian) for ‘red’ is hulayan (Kuribayashi 1989) which might lead one to assert that -kaŋ is a remnant from the Script Mongolian, but the Script Mongolian for ‘yellow’ is şıra. Moreover, -aya- sequences have become a: in most modern pronunciations (Bu 1986:60-5). So the source and meaning of -pa- ~ -pu- is a mystery.²⁵

In words of Chinese origin, /p/ occurs in the syllable onset in the C₁ position, but it does not occur in the syllable coda.²⁶ This means it occurs after

²⁵ Charles N. Li (personal communication) has found similar color terms with infixation in Baonan.

²⁶ Since only /n/ and /ŋ/ occur in the syllable coda in both Chinese and Hui, henceforth I will not mention that other consonants do not occur in the syllable coda.

vowels, nasals, and glides in polysyllabic words as in (11) through (14). In addition, /p^h/ occurs before glides as in (15).²⁷

(11)	putau	‘grape’
(12)	xopiŋ	‘peace’
(13)	niənpəŋ	‘washbasin’
(14)	taipiŋ	‘peace and tranquility’
(15)	piəu	‘ticket’

ii) The distribution of /p^h/ in mono-morphemic words of Mongolic origin and words of Chinese origin is radically different. All non-initial occurrences of /p^h/ are of non-Mongolic origin, (except for the examples (4) and (5) given above).

4.1.2.1.2 The phoneme /t^h/ = t

i) The phoneme /t^h/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it can occur after vowels or nasals.

(16)	tʉga	‘chicken’
(17)	mutuŋ	‘tree’
(18)	antaŋ	‘gold’

There is only one example of /t^h/ occurring after /ŋ/ in a mono-morphemic word of Mongolic origin, given in (19). All other instances of /t^h/ occur after /n/ when it follows a nasal.

(19)	maŋta	‘to dig, to excavate’
------	-------	-----------------------

²⁷ In this section, examples are usually laid out in the following manner, unless otherwise noted. The first example illustrates the word-initial environment. The second example illustrates the after-vowels environment, and the third example illustrates the after-nasals environment.

There are many examples, however, where a suffix beginning with /t^h/ is added (especially the adjectivizer -tu) to words ending in /ŋ/, as in (20). Thus the homorganic nasal-stop constraint only applies to mono-morphemic words.

- (20) sʌkʌŋtu ‘bearded’ (from sʌkʌŋ ‘beard’ + -tu)

There are only two instances of /t^h/ occurring after glides. These are given in (21) and (22).

- (21) naita ‘to sneeze’
 (22) ɕiautulia ‘to kneel’

There are no instances of /t^h/ occurring before glides in mono-morphemic words of Mongolic origin.

In words of Chinese origin, /t^h/ occurs in the syllable onset in the C₁ position. This means it can occur after vowels and nasals in polysyllabic words as in (24) and (25). In addition, /t^h/ occurs before glides, as in (26).

- (23) tofəŋ ‘hump of a camel’
 (24) mutʌŋ ‘charcoal’
 (25) tʂʌŋtəu ‘gain, profit’
 (26) tuanjan ‘member’

However, examples (27) and (28) are the only instances of /t^h/ occurring after a glide. In example (28), udzə is Santa for ‘to see’.

- (27) xəitʌŋ ‘brown sugar’
 (28) ɕiauta udzə ‘to sneer, to jeer’ Chinese/Santa

ii) The distribution of /t^h/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /t^h/ does not occur after /ŋ/ in words of Mongolic origin (one exception: (19)), while this does occur in Chinese loans, as in example (25) above; b) /t^h/ rarely occurs after glides in words of Mongolic origin (two instances: (21) and (22)) and in words of Chinese origin (two instances: (27) and (28)); and c) /t^h/ never occurs before

glides in words of Mongolic origin while in words of Chinese origin /t^h/ does occur before glides (but only /w/ glides due to palatalization; see section 3.2.4).

4.1.2.1.3 The phoneme /k^h/ = k

i) The phoneme /k^h/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it can occur after vowels or nasals. In addition, /k^h/ occurs before glides as in (30), but it does not occur after glides.

- | | | |
|------|--------|---------------------|
| (29) | kai | ‘wind’ |
| (30) | nokiə | ‘to knit, to weave’ |
| (31) | tuŋku | ‘to push, to shove’ |
| (32) | kiəliə | ‘to say’ |

There are no examples of /k^h/ occurring after /n/ in words of Mongolic origin. There are very few examples of /k^h/ occurring after vowels in monomorphemic words of Mongolic origin. Here are some more examples.

- | | | |
|------|-------------|---|
| (33) | gaduŋ məkiə | ‘mother-in-law’ |
| (34) | əkiə | ‘female or mother animal; female, mother’ |
| (35) | nokiən | ‘hole, hollow, pit’ |
| (36) | pukutu | ‘for the sky to become cloudy’ |

There are many examples of /k^h/ occurring after vowels in polymorphemic words of Mongolic origin. These involve the imperfective nominalizing suffix -ku as in (37).

- | | | |
|------|-----------|--|
| (37) | dzəɣərəku | ‘disagreeable things, disgusting things’
(from <u>dzəɣərə</u> ‘to be disgusted with’ + <u>-ku</u>) |
|------|-----------|--|

In words of Chinese origin, /k^h/ occurs in the syllable onset in the C₁ position. This means it can occur after vowels and nasals in polysyllabic words as in the examples below. In addition, /k^h/ occurs before glides as in (40) and (41).

- | | | |
|------|----------|------------------------|
| (38) | kudan | ‘gall bladder’ |
| (39) | dukəu | ‘ferry’ |
| (40) | tɕiŋkuaŋ | ‘condition, situation’ |
| (41) | kuadzi | ‘hip’ |

In words of Chinese origin, /k^h/ may follow /n/.

- | | | |
|------|-------------|--------------|
| (42) | niənkuaŋdzi | ‘eye socket’ |
|------|-------------|--------------|

But /n/ commonly becomes /ŋ/ when preceding /k^h/, even in words of Chinese origin.

- | | | |
|------|--------|---|
| (43) | məŋkaŋ | ‘threshold’ (from Chinese <u>ménkǎn</u>) |
|------|--------|---|

There is only one example of /k^h/ occurring after a glide, given in (44). giə is a Mongolic verb meaning ‘to do’. When a disyllabic verb is borrowed from Chinese, it almost always occurs with giə. All verbal morphology is attached to giə.

- | | | | |
|------|-----------|-----------------------------|---------------|
| (44) | bauko giə | ‘to include, to consist of’ | Chinese/Santa |
|------|-----------|-----------------------------|---------------|

ii) The distribution of /k^h/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /k^h/ is somewhat rare after vowels in words of Mongolic origin; b) /k^h/ only occurs after /ŋ/ in words of Mongolic origin, while it does occur after /n/ in words of Chinese origin; and c) /k^h/ occurs before both /j/ and /w/ glides in words of Mongolic origin, but only before /w/ in words of Chinese origin.

4.1.2.1.4 The phoneme /q^h/ = q

i) The phoneme /q^h/ occurs word-initially in the C₁ position and only in words of Mongolic origin.

- | | | |
|------|--------|---------------|
| (45) | qara | ‘black, dark’ |
| (46) | qawgəi | ‘pig, swine’ |

There are a few exceptions to this. There are two examples of /q^h/ occurring after vowels in (47) and (48).

- | | | | |
|------|------------|-------------|--------------------------|
| (47) | oqo | ‘short’ | Santa |
| (48) | qaruqa(də) | ‘next door’ | Santa (Longquan dialect) |

There are two examples of /q^h/ occurring after a nasal. Phonetically /ŋ/ preceding /q^h/ in examples (49) and (50) is [N], a voiced uvular nasal.

- | | | | |
|------|-------------|------------------|--------------------------|
| (49) | dzəŋqəi | ‘to swallow’ | Santa |
| (50) | qəŋqəŋ osuŋ | ‘sandthorn weed’ | Santa (Longquan dialect) |

There are also four examples of /q^h/ occurring before /w/ glides. However, /q^h/ does not occur before /j/ glides or after glides.

- | | | |
|------|-------------|--------------------------------|
| (51) | quaitʂəŋ | ‘old, worn, used’ |
| (52) | quəina | ‘after, later’ |
| (53) | quəitu əwəi | ‘step-father’ |
| (54) | quəitsi udu | ‘the next day, the second day’ |

The phoneme /q^h/ never occurs in words of Chinese origin.

ii) The phoneme /q^h/ is indigenous to Mongolic. It is also found in a few words of unknown origin. /q^h/ is never found in words of Chinese origin.

4.1.2.1.5 The phoneme /p/ = b

i) The phoneme /p/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it can occur after vowels and nasals.

- | | | |
|------|-----------------|--|
| (55) | bula | ‘spring (of water)’ |
| (56) | həbəkɪ ~ həbukɪ | ‘butterfly’ |
| (57) | ʂunbəŋ | ‘fly’ /ʂunpəŋ/ → [ʂum ^h pəŋ] |

Example (57) illustrates that phonemic /n.p/ sequences are phonetically [m.p]. This is striking, because Santa syllable coda constraints do not allow for

the presence of the nasal /m/ in the syllable coda. Only the nasals /n/ and /ŋ/ are allowed. This is the strongest evidence for the presence of a homorganic nasal-stop constraint. Other examples are given in (35) and (59).

- (58) nanbaŋ guki 'a type of insect'
 /nanpaŋ quki/ → [nām'pāŋ qu'ɕi] unknown source/Santa
 (59) unba 'to swim' /unpa/ → [ūm'pa] ~ [ūn'pa]

Example (59) is interesting because I have encountered both pronunciations. Historical and comparative analysis supports the original presence of the /m.p/ sequence as seen in (60).

- (60) (Kuribayashi 1989:368)
- | | | |
|-----------|--------------|-----------|
| Script M. | umba- | 'to swim' |
| Mongolian | umbān | |
| Dagur | χompaa- | |
| E. Yugur | umba- | |
| Monguor | xumba- | |
| Baonan | mba- | |
| Santa | unba-, umba- | |

But the syllable coda restraints on /m/ may be changing because of the reanalysis of [m.p] sequences yielding unba in some pronunciations. This may be a snapshot of contact-induced language change in process because Chinese influence on the Santa syllable structure disallows the presence of a bilabial nasal in the coda. Thus, even though all occurrences of [m] in the syllable coda are at the phonetic level, apparently these are also being affected by Santa syllable structure constraints yielding [n.p] sequences.

However, the extent to which the homorganic nasal-stop constraint permeates Santa is evidenced by the rule applying to borrowed Chinese words as in (61).

- (61) nanpaŋ ‘kneading board’ /nanpaŋ/ → [nām¹pāŋ]
(from Chinese ànbǎn)

/p/ does not occur after glides in mono-morphemic words of Mongolic origin. There are three instances of /p/ occurring before the /j/ glide in examples (62) through (64).

- | | | |
|------|---------|-------------------------|
| (62) | biəri | 'wife, daughter-in-law' |
| (63) | biədun | 'wide, thick' |
| (64) | biətsən | 'monkey' |

In words of Chinese origin, /p/ occurs in the syllable onset in the C₁ position. This means it may be found after vowels, nasals, and glides in polysyllabic words as the examples below show. In addition, /p/ occurs before /j/ glides as in (69), but not before /w/ glides. In this way, the distribution of /p/ before glides is the same as Mongolic.

- | | | |
|------|---------|------------------|
| (65) | biŋ | 'soldier' |
| (66) | tʃabudo | 'nearly, almost' |
| (67) | gaŋbi | 'pen' |
| (68) | maibo | 'pulse' |
| (69) | biənsi | 'dumpling' |

ii) The distribution of /p/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) if a nasal precedes /p/ in words of Mongolic origin or non-Chinese origin, phonetically it will most likely be [m], while phonemically it will be /n/ or /ŋ/. One does find [ŋp] and [np] sequences in words of Chinese origin as seen in (67) above. And b) /p/ does not occur after glides in words of Mongolic origin while it does in words of Chinese origin.

4.1.2.1.6 The phoneme /t/ = d

i) The phoneme /t/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it can occur after vowels and nasals.

- | | | |
|------|--------|----------------------------------|
| (70) | durɒŋ | ‘wish, hope, desire, aspiration’ |
| (71) | xoduŋ | ‘star’ |
| (72) | əndəʁi | ‘egg’ |

In mono-morphemic words of Mongolic origin, /t/ never follows /ŋ/. But in poly-morphemic words, /t/ may follow /ŋ/ after a morpheme boundary as in (73).

- | | | | |
|------|-----------|------|---------------------------------|
| (73) | oroŋ-də | ətʃi | ‘to substitute for, to replace’ |
| | place-LOC | go | |

There are two instances of /t/ occurring after a glide in (74) and (75).

- | | | |
|------|--------------|----------------------|
| (74) | kaidaɣa | ‘to cast, to let go’ |
| (75) | dzaidan mori | ‘bare-backed horse’ |

There is one instance of /t/ occurring before a glide in (76).

- | | | |
|------|-----------|-------------|
| (76) | duan ~doŋ | ‘folk song’ |
|------|-----------|-------------|

In words of Chinese origin, /t/ occurs in the syllable onset in the C₁ position. This means it can occur after vowels, nasals, and glides in polysyllabic words as the examples below demonstrate. In addition, /t/ occurs before glides as well.

- | | | |
|------|--------|--------------------------|
| (77) | daŋ | ‘political party’ |
| (78) | toɗaŋ | ‘stable, steady, proper’ |
| (79) | liŋdau | ‘leader, leadership’ |
| (80) | maudan | ‘ball’ |
| (81) | xoduəi | ‘bonfire, campfire’ |

ii) The distribution of /t/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The chief differences are that a) /t/ never follows /ŋ/ in words of Mongolic origin; and b) /t/ rarely occurs after glides in words of Mongolic origin while in words of Chinese origin it is common; and c) /t/ rarely occurs before glides in words of Mongolic origin while in words of Chinese origin /t/ does occur before glides (but only /w/ glides due to palatalization; see section 3.2.4).

4.1.2.1.7 *The phoneme /k/ = q*

i) The phoneme /k/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it occurs after vowels and after nasals. /k/ also occurs before /j/ glides as in (84) and (85), but not before /w/ glides.

- | | | |
|------|----------|----------------------|
| (82) | gun | ‘deep’ |
| (83) | fugu | ‘to die’ |
| (84) | hoŋgiəri | ‘to fall, to tumble’ |
| (85) | kugiə | ‘blue’ |

There is one instance of /k/ occurring after /n/ in a word of Mongolic origin. /ŋ/ precedes /k/ in all other cases.

- | | | |
|------|--------|----------|
| (86) | miəngu | ‘silver’ |
|------|--------|----------|

There is one instance of /k/ occurring after a glide given in (87).

- | | | |
|------|----------|---------------|
| (87) | daigoʃuŋ | ‘immediately’ |
|------|----------|---------------|

In words of Chinese origin, /k/ occurs in the syllable onset in the C₁ position. This means it occurs after vowels, nasals, and glides in polysyllabic words as in the examples below. In addition, /k/ occurs before glides as in (92).

(88)	ganbu	‘cadre’
(89)	dziəgo	‘outcome, result’
(90)	dangau	‘cake’
(91)	bəigo	‘hunchbacked’
(92)	guançi	‘relationship’

ii) The distribution of /k/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /k/ rarely follows /n/ in words of Mongolic origin while this is common in words of Chinese origin as shown in (90); b) /k/ rarely occurs after glides in words of Mongolic origin while it does in words of Chinese origin; and c) /k/ occurs before /j/ glides in words of Mongolic origin but not /w/ glides, but in words of Chinese origin /k/ occurs primarily before /w/ glides but not /j/ glides.

4.1.2.1.8 The phoneme /q/ = q

i) The phoneme /q/ occurs in the syllable onset in the C₁ position in words of non-Chinese origin. It may be found after vowels and nasals, but not after glides.

(93)	goni	‘sheep’
(94)	tʃiGəŋ	‘ear’
(95)	suŋGu	‘to choose, to opt, to select’ /suŋqu/ → [sũN ^h qu]

When /ŋ/ precedes /q/ as in example (95) above, phonetically it is [N], a voiced uvular nasal.

/q/ is fairly rare between vowels. There are 10 mono-morphemic examples of intervocalic /q/, a few are given below.

(96)	tʃiGaŋ	‘white’
(97)	tʃiGara	‘urgent, pressing, tense, busy’
(98)	çiGəidzɨ udzə	‘to stare, to gaze fixedly’

There is one instance of /q/ occurring before a glide in a mono-morphemic word given in (99).

and /tʂʰ/ and the unaspirated affricates /ts/, /tʂ/, and /tʂ/. Therefore each of these segments is represented as its own phoneme.

This situation in Santa is identical to the one present in Mandarin Chinese and is clearly a result of contact-induced language change.

4.1.2.2.1 *The phoneme /tsʰ/ = ts*

i) The phoneme /tsʰ/ does not occur in words of Mongolic origin.

In words of Chinese origin, the phoneme /tsʰ/ only appears in eleven examples in Bu (1983). Ten of these occurrences are word-initial in the C₁ position. The other occurrence is after a vowel in the C₁ position as in (101). It does not occur after nasals or after glides. Moreover, it does not occur before glides.

- | | | |
|-------|----------|------------------|
| (100) | tsailiau | ‘data, material’ |
| (101) | itsi | ‘fishbone’ |

/tsʰ/ is often reduced to a voiceless alveolar fricative [s], which is indigenous to Santa as in (102). (See section 4.1.2.3.1.)

- | | | |
|-------|-----|--|
| (102) | sai | ‘vegetable, greens’ (from Chinese <u>cái</u>) |
|-------|-----|--|

ii) The phoneme /tsʰ/ does not occur in mono-morphemic words of Mongolic origin. It only occurs in words of Chinese origin. The status of /tsʰ/ as a phoneme in Santa is questionable.

4.1.2.2.2 *The phoneme /tʂʰ/ = tʂ*

i) The phoneme /tʂʰ/ occurs word-initially and after vowels in the C₁ position in words of Mongolic origin. This means it does not normally occur after nasals. However /tʂʰ/ does occur before /j/ glides as in (105), but not before /w/ glides.

- | | | |
|-------|----------|------------------|
| (103) | tɕiaurɯŋ | ‘head’ |
| (104) | otɕin | ‘girl, daughter’ |
| (105) | otɕiau | ‘old’ |

There is one example from Bu (1983) of /tɕ^h/ following /n/ given in (106). There are no examples of /tɕ/ following /ŋ/.

- | | | |
|-------|-------------|--------------------------------------|
| (106) | tɕiəntɕiəlu | ‘to feel about, to fumble, to grope’ |
|-------|-------------|--------------------------------------|

There is one instance of /tɕ^h/ occurring after a glide given in (107).

- | | | |
|-------|----------|-------|
| (107) | naitɕiən | ‘wet’ |
|-------|----------|-------|

In words of Chinese origin, /tɕ^h/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, and glides in polysyllabic words as the examples below demonstrate. In addition, /tɕ^h/ occurs before /j/ glides, but not before /w/ glides. This is true for words of both Mongolic and Chinese origin, in fact, /tɕ^h/ must always precede either /j/ or [i].

- | | | |
|-------|------------|---|
| (108) | tɕiən | ‘money’ |
| (109) | xotɕi | ‘amiable, gentle, kind, polite’ |
| (110) | ɕiŋtɕi | ‘week’ |
| (111) | daitɕi giə | ‘to replace, to substitute for’ Chinese/Santa |
| (112) | tɕiauliau | ‘flavoring, seasoning’ |

In Santa, there is a palatalization process (an areal feature found in the Gansu-Qinghai border region) which affects /t^h/ and /t/ before /i/ or /j/ resulting in /tɕ^h/ and /tɕ/ respectively. Thus, most instances of the phoneme /tɕ^h/ in Santa are a result of this process. This is true not only for words of Mongolic origin, but for words of Chinese origin as well as can be seen in (113). As one can see in the comparative evidence with Baonan in examples (114) and (115), there is a /tɕ^h/ to /t^h/ correspondence. See section 3.2.4 for more on palatalization.

(113)	tɕibau	‘bag, handbag’ (from Chinese <u>tíbāo</u>)
(114)	Santa Baonan	funitɕiə honərtə ‘to smell’
(115)	Santa Baonan	kuəitɕiən kitóŋ ‘cold (adj.)’

Example (116) shows some words of Chinese origin that originally have /tɕ^h/ and are not a result of palatalization.

(116)	jautɕiu	‘claim, demand’ from Chinese <u>yāoqiú</u>
	tɕiaŋ	‘gun, rifle’ from <u>qiāng</u>
	ɕintɕi	‘week’ from Chinese <u>xīngqì</u>

ii) The distribution of /tɕ^h/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /tɕ^h/ does not follow nasals in words of Mongolic origin (one exception: (106)) but common in words of Chinese origin; and b) /tɕ^h/ does not occur after glides in words of Mongolic origin (one exception: (107)) but common in words of Chinese origin.

4.1.2.2.3 The phoneme /tɕ^h/ = tɕ

i) The phoneme /tɕ^h/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it may occur after vowels and nasals. /tɕ^h/ does not occur before glides.

(117)	tɕiɣaŋ	‘white’
(118)	ətɕi	‘to go’
(119)	bantɕə	‘grazing land, pasture’

The phoneme /tɕ^h/ rarely follows nasals in mono-morphemic words of Mongolic origin. There is one example of /tɕ^h/ following /ŋ/ in a word of Mongolic origin given in (120).

- (120) *jaŋtʂi* 'to thresh grain (on the threshing floor)'

There are also two instances of /tʂ^h/ occurring after a glide:

- (121) *qaitʂi* 'scissors, shears'
 (122) *quaitʂəŋ* 'old, worn, used'

In words of Chinese origin, /tʂ^h/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words. In addition, /tʂ^h/ occurs before /w/ glides as in (127), but not before /j/ glides.

- (123) *tʂədzi* 'car, pushcart, small vehicle'
 (124) *dʒitʂu* 'foundation, base, basis'
 (125) *dʒiŋtʂəŋ* 'constantly, frequently, often'
 (126) *xaitʂau* 'tide'
 (127) *tʂuan* 'boat, ship'

ii) The distribution of /tʂ^h/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /tʂ^h/ rarely follows /n/ or /ŋ/ in words of Mongolic origin but common in words of Chinese origin; b) /tʂ^h/ rarely occurs after glides in words of Mongolic origin but common in words of Chinese origin; and c) /tʂ^h/ never occurs before glides in words of Mongolic origin while in words of Chinese origin /tʂ^h/ precedes /w/ glides but not /j/ glides.

4.1.2.2.4 The phoneme /ts/ = *dz*

i) The phoneme /ts/ does not occur in mono-morphemic words of Mongolic origin.

In words of Chinese origin, /ts/ occurs in the syllable onset in the C₁ position. This means it occurs after vowels, nasals, and glides in polysyllabic words as in the examples below. In addition, /ts/ occurs before /w/ glides as in (132), but not before /j/ glides.

(128)	dzaixai	‘calamity, disaster’
(129)	fudza	‘complex, complicated’
(130)	duŋɕiaŋdzu	‘Santa nationality’
(131)	baudzi	‘leopard’
(132)	dzuandzi	‘drill, auger’

It should be noted that over 200 of the 300 plus occurrences of /ts/ in Bu (1983) are instances of the suffix -dzi which functions as a noun suffix in Chinese.

The phoneme /ts/ is found in words of other origins as well.

(133)	badza	‘city, free market’	Turkic
(134)	dzəmi ~ dzəmin	‘the earth, the globe’	Persian
(135)	orodzo	‘fast (abstain from meat, wine, etc.)’	Arabic

ii) The phoneme /ts/ is not found in words of Mongolic origin. It is only found in borrowed words of Chinese, Turkic, Persian, Arabic origin and a number of words of unknown origin.

4.1.2.2.5 The phoneme /tɕ/ = dz

i) The phoneme /tɕ/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it may occur after vowels or nasals. In addition, /tɕ/ occurs before /j/ glides as in (139), but not before /w/ glides.

(136)	dziərə	‘on, on top of’
(137)	gudzin	‘fast, quick’
(138)	dziliən	‘glossy, sleek’
(139)	dziəu	‘younger brother’

There are no examples of /tɕ/ following /ŋ/ in words of Mongolic origin.

There are three instances of /tɕ/ occurring after a /w/ glide as in the examples given below.

- | | | |
|-------|------------|----------|
| (140) | ɕiaudziə | ‘shadow’ |
| (141) | ʂaudziəron | ‘dew’ |
| (142) | dʒaudziŋ | ‘dream’ |

In words of Chinese origin, /tɕ/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as in the examples below. In addition, /tɕ/ occurs before /j/ glides, but not before /w/ glides. This is true for words of both Mongolic and Chinese origin, in fact, /tɕ/ must always precede either /j/ or [i].

- | | | |
|-------|-----------|------------------------|
| (143) | dʒiu | ‘wine, liquor’ |
| (144) | fəidzi | ‘airplane, aircraft’ |
| (145) | dʒuanɕzia | ‘crops’ |
| (146) | laudzia | ‘birthplace, hometown’ |
| (147) | dʒiəndan | ‘simple’ |

As previously mentioned in 4.1.2.2.2, there is a palatalization process (an areal feature found in the Gansu-Qinghai border region) which affects /tʰ/ and /t/ before /i/ or /j/ resulting in /tɕʰ/ and /tɕ/ respectively. Thus, most instances of the phoneme /tɕ/ in words of Mongolic origin are a result of this process. This is true not only for words of Mongolic origin, but it is also true for words of Chinese origin as is shown in example (148). As one can see in the comparative evidence with Baonan in examples (149) and (150), there is a /tɕ/ to /t/ correspondence. See section 3.2.4 for more on palatalization.

- | | | | |
|-------|-----------------|-----------------------------------|-----------|
| (148) | dʒiən | ‘electricity’ (from Chinese diàn) | |
| (149) | Santa
Baonan | dʒiəron
dərɔŋ | ‘four’ |
| (150) | Santa
Baonan | dʒiauli
dʁl | ‘to jump’ |

There are many words of Chinese origin which have /tɕ/ which are not a result of the palatalization process. Some examples are shown in (151).

- | | | | |
|-------|-------------|----------------------------------|--------------------------|
| (151) | dʒiau | ‘cellar’ | from Chinese <u>jiào</u> |
| | dʒila | ‘to record, to take notes’ | from Chinese <u>jì</u> |
| | maumaudʒiaŋ | ‘artisan who makes fur clothing’ | |
| | | from Chinese <u>máomaojiàng</u> | |

ii) The distribution of /tʃ/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /tʃ/ never follows /ŋ/ in words of Mongolic origin but common in words of Chinese origin; and b) /tʃ/ rarely follows glides in words of Mongolic origin but common in words of Chinese origin.

4.1.2.2.6 The phoneme /tʃ/ = dʒ

i) The phoneme /tʃ/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it may occur after vowels and nasals. However, /tʃ/ does not occur before glides.

- | | | |
|-------|---------|----------|
| (152) | dʒaŋsun | ‘snow’ |
| (153) | udʒə | ‘to see’ |
| (154) | əndʒəʁə | ‘donkey’ |

There is only one example in a mono-morphemic word of Mongolic origin with /tʃ/ following /ŋ/, but this pronunciation alternates with one where /tʃ/ follows /n/.

- | | | |
|-------|-------------------|----------|
| (155) | gaŋdʒuŋ ~ gandʒuŋ | ‘sleeve’ |
|-------|-------------------|----------|

There is one instance of /tʃ/ occurring after a glide, given in (156).

- | | | |
|-------|-------------|-----------------------|
| (156) | dʒiaudʒiliə | ‘to hang, to suspend’ |
|-------|-------------|-----------------------|

In words of Chinese origin, /tʃ/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as in the examples below. In addition, /tʃ/ occurs before /w/ glides as in (161), but not before /j/ glides.

(157)	dzuntau	‘hour’
(158)	fadzɔn	‘development, expansion’
(159)	tɯŋdzi	‘comrade’
(160)	gaidzi	‘ring’
(161)	tɕiaŋdzuaŋ	‘strong, sturdy, robust’

ii) The distribution of /tʂ/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /tʂ/ does not follow /ŋ/ in words of Mongolic origin (one exception: (155)) but common in words of Chinese origin; and b) /tʂ/ never occurs before glides in words of Mongolic origin while in words of Chinese origin /tʂ/ precedes /w/ glides but not /j/ glides.

4.1.2.3 Coronal fricatives

The coronal fricatives in Santa are /s/, /ç/, /ʃ/, and /ʒ/. The coronal fricatives are distinguishable from the non-coronal fricatives in that the blade or tip of the tongue is used to produce them. Also, see discussion in section 4.1.2.2 above.

4.1.2.3.1 The phoneme /s/ = s

i) The phoneme /s/ occurs word-initially and after vowels in the C₁ position in words of Mongolic origin. Moreover, /s/ rarely occurs after glides or nasals and never before glides.

(162)	sara	‘month, moon’
(163)	usu	‘water’

There are three instances of /s/ occurring after nasals in words of Mongolic origin (Bu 1983) given in (164) through (166).

- | | | |
|-------|---------|--------|
| (164) | mansuŋ | ‘ice’ |
| (165) | daŋsuŋ | ‘salt’ |
| (166) | dzaŋsuŋ | ‘snow’ |

It appears that the /suŋ/ of these three examples may be some sort of suffix that has now been incorporated into the noun root. These words cannot stand alone without -suŋ.

There are three instances of /s/ occurring after glides, given below.

- | | | |
|-------|---------|---|
| (167) | kuaisuŋ | ‘navel’ |
| (168) | lausa | ‘mule’ |
| (169) | dziausi | ‘to unfold (a mattress), to pad (a mattress)’ |

Both Liu (1981:16) and Bu (1986:42) claim that /s/ may occur in the syllable coda, albeit rarely. Examples (170) through (172) illustrate their claim.

- | | | |
|-------|----------|---|
| (170) | dos | ‘friend (believing brother)’ from Liu (1981:16) |
| (171) | kəwos | ‘child’ from Liu (1981:16) |
| (172) | tasbixəʃ | ‘Islamic rosary’ from Bu (1986:42) |

Liu (1981) and Bu (1986) also both agree that these words have alternate pronunciations with an epenthetic vowel [ɪ] inserted after the /s/ which results in the /s/ becoming part of the syllable onset rather than the coda. My consultant, Ma Zixiang, consistently agreed that the /s/ in words like this should be syllabified as its own syllable. Therefore, I do not consider the possibility of /s/ occurring in the Santa syllable coda. The two factors that are misleading with respect to this problem are that the a) the epenthetic vowel is voiceless and b) this syllable does not receive stress, even when it occurs word-finally. Thus, in my analysis, example (170) above is given as (173) below.

- | | | | |
|-------|-----|------------------------------|--------------------|
| (173) | dos | ‘friend (believing brother)’ | /ˈtosi/ → [ˈdʷosɪ] |
|-------|-----|------------------------------|--------------------|

In words of Chinese origin, /s/ occurs in the syllable onset in the C₁ position. This means it occurs after vowels and nasals in polysyllabic words as in

the examples below. In addition, /s/ occurs before /w/ glides as in (177), but not before /j/ glides.

- | | | |
|-------|---------|-----------------|
| (174) | si | ‘silk’ |
| (175) | isan | ‘umbrella’ |
| (176) | fɯŋsu | ‘custom, habit’ |
| (177) | suanpan | ‘abacus’ |

There is one instance of /s/ occurring after a glide, given in (178).

- | | | |
|-------|---------|---------|
| (178) | nausuəi | ‘brain’ |
|-------|---------|---------|

ii) The distribution of /s/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /s/ rarely occurs after nasals in words of Mongolic origin but common in words of Chinese origin; and b) /s/ does not occur before glides in words of Mongolic origin while in words of Chinese origins /s/ occurs before /w/ glides, but not before /j/ glides.

4.1.2.3.2 The phoneme /ɕ/ = ɕ

i) The phoneme /ɕ/ occurs word-initially and after vowels in words of Mongolic origin. It does not occur after nasals or glides. However, /ɕ/ occurs before /j/ glides, but not before /w/ glides.

- | | | |
|-------|--------|-------------------|
| (179) | ɕiniə | ‘to laugh’ |
| (180) | piɕiə | ‘belt, waistband’ |
| (181) | ɕiəukə | ‘earring’ |

In words of Chinese origin, /ɕ/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as in the examples below. In addition, /ɕ/ occurs before /j/ glides, but not before /w/ glides. This is true for words of both Mongolic and Chinese origin, in fact, /ɕ/ must always precede either /j/ or [i].

(182)	ɕia	‘gorge’
(183)	dzuɕi	‘chairman’
(184)	duŋɕiaŋ	‘Dongxiang, Santa’
(185)	laubaɕiŋ	‘common people, ordinary people’
(186)	ɕiauɕi	‘news, information’

ii) The distribution of /ɕ/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /ɕ/ does not occur after nasals in words of Mongolic origin but common in words of Chinese origin; and b) /ɕ/ does not occur after glides in words of Mongolic origin but common in words of Chinese origin.

4.1.2.3.3 The phoneme /ʃ/ = ʂ

i) The phoneme /ʃ/ occurs word-initially and after vowels in the C₁ position in words of Mongolic origin. It does not occur after nasals or glides. Moreover, /ʃ/ does not occur before glides.

(187)	ʃiduŋ	‘tooth’
(188)	oʃiɕi	‘heel’

There is one example where /ʃ/ follows a nasal in a word of Mongolic origin, given in (189).

(189)	oŋʃi ~ waŋʃi	‘to read’
-------	--------------	-----------

In words of Chinese origin, /ʃ/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as in the examples below. In addition, /ʃ/ occurs before /w/ glides, but not /j/ glides.

(190)	ʂaŋ	‘injury, wound’
(191)	taʂi	‘dependable, steady and sure’
(192)	xuŋʂuəi	‘flood’
(193)	lauʂi	‘teacher’
(194)	ʂuaŋ	‘pair’

ii) The distribution of /ʂ/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is somewhat different. The differences are that a) /ʂ/ does not occur after nasals in words of Mongolic origin (one exception: (189)) but common in words of Chinese origin; b) /ʂ/ does not occur after glides in words of Mongolic origin but is common in words of Chinese origin; and c) /ʂ/ does not occur before glides in words of Mongolic origin but is common in words of Chinese origin.

4.1.2.3.4 The phoneme /ʐ/ = ʐ

i) The phoneme /ʐ/ does not occur in words of Mongolic origin.

In words of Chinese origin, /ʐ/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as in the examples below. Example (199) is the only instance of /ʐ/ occurring before a glide in Bu (1983).

(195)	ʐənluaɪ	‘humanity, mankind’	
(196)	dʒiəʐi	‘festival, holiday’	
(197)	ʂəŋʐəŋ	‘sage, wiseman’	
(198)	ʂəuʐu	‘income, earnings, revenue’	
(199)	ʐuandʒiən jawudaŋ	‘trotting style (of horses)’	Chinese/Santa

/ʐ/ also occurs in one word of Arabic origin.

(200)	ʐuhə	‘spirit, soul’
-------	------	----------------

ii) The phoneme /ʐ/ does not appear in words of Mongolic origin. In words of Chinese origin, /ʐ/ appears in the syllable onset in the C₁ position. It also occurs in words of Arabic origin.

4.1.2.4 Non-coronal fricatives

The non-coronal fricatives are /f/, /x/, /h/, and /ɣ/. These are distinguishable from the coronal fricatives in that the tip or blade of the tongue is not used to produce them.

4.1.2.4.1 The phoneme /f/ = f

i) The phoneme /f/ occurs only word-initially in the C₁ position in words of Mongolic origin. That means it does not occur after vowels, nasals, or glides. Moreover, /f/ does not occur before glides.

- | | | |
|-------|------|----------|
| (201) | fudɑ | ‘long’ |
| (202) | fugu | ‘to die’ |

In words of Chinese origin, /f/ occurs in the syllable onset in the C₁ position. This means it occurs after vowels, nasals, and glides in polysyllabic words as in the examples below. However, /f/ does not occur before glides.

- | | | |
|-------|-------|-------------------------------------|
| (203) | futɕi | ‘good fortune’ |
| (204) | fufəŋ | ‘blessing, good fortune, happiness’ |
| (205) | banfa | ‘way, method, means’ |
| (206) | dəufu | ‘bean curd, tofu’ |

ii) The distribution of /f/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is quite different. The phoneme /f/ only occurs word-initially in words of Mongolic origin, but it occurs in the syllable onset in words of Chinese origin. Thus any /f/ encountered after a vowel, nasal, or glide is not of Mongolic origin.

4.1.2.4.2 The phoneme /x/ = x

i) The phoneme /x/ only occurs word-initially in the C₁ position in words of Mongolic origin. This means it does not occur after vowels, nasals, or glides.

(207) xulaŋ ‘red’

There is one instance given in (208) where /x/ occurs after a vowel. However, there is another pronunciation where /x/ alternates with /ɣ/.

(208) tuxaŋ ~ tuɣaŋ ‘thin, lean’

There are two instances of /x/ occurring before glides, given below.

(209) xuan ‘year’

(210) xuəiɣa ‘to tie, to fasten’

In words of Chinese origin, /x/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as the examples below demonstrate. In addition, /x/ occurs before /w/ glides as in (215), but not before /j/ glides.

(211) xai ‘sea, ocean’

(212) maxu ‘careless, casual’

(213) jaŋxo ‘matches’

(214) dzaixai ‘disaster, calamity’

(215) xuantuŋ ‘brass’

ii) The distribution of /x/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is quite different. The differences are that a) /x/ only occurs word-initially in words of Mongolic origin while it occurs after vowels, nasals, and glides in words of Chinese origin; and b) /x/ rarely occurs before glides in words of Mongolic origin while in words of Chinese origin /x/ is common before /w/ glides, but never before /j/ glides.

4.1.2.4.3 The phoneme /h/ = h

i) The phoneme /h/ only occurs word-initially in the C₁ position in words of Mongolic origin. This means it does not occur after vowels, nasals, or glides. Moreover, /h/ does not occur before glides.

- | | | |
|-------|---------|------------|
| (216) | haroŋ | ‘ten’ |
| (217) | huntura | ‘to sleep’ |

There are two Arabic loans where /h/ occurs after a vowel.

- | | | |
|-------|------------|-----------------------------------|
| (218) | zuhə | ‘spirit, soul’ |
| (219) | məhə'luɣəi | ‘people and all kinds of animals’ |

The phoneme /h/ does not occur in words of Chinese origin.

ii) The phoneme /h/ only appears word-initially in mono-morphemic words of Mongolic origin. In some Arabic loans it occurs after vowels. It is not found in words of Chinese origin.

4.1.2.4.4 The phoneme /ɣ/ = ɣ

i) The phoneme /ɣ/ occurs after vowels or nasals in the C₁ position in words of Mongolic origin. It does not occur word-initially. However, Bu (1983) gives two examples of word-initial /ɣ/. Both are suspect. One, example (220), can be analyzed as a suffix (appearing only after numerals). The other, example (221), is mono-morphemic semantically with no apparent morpheme boundaries, so it is analyzable as a single word.

- | | | |
|-------|------------|----------------------|
| (220) | niə-ɣa | ‘one bowl of’ |
| (221) | oɣi ← o ɣi | ‘to dawn’ |
| (222) | dzuɣə | ‘heart’ |
| (223) | ɣuŋɣi | ‘kite, sparrow hawk’ |

There is only one instance of /ɣ/ occurring after /n/. This is given in (224).

- | | | |
|-------|--------|--|
| (224) | banɣan | ‘wife of elder brother, sister-in-law’ |
|-------|--------|--|

There are two instances of /ɣ/ occurring after glides, given below. However, the -ɣaŋ in example (226) may be a lexicalized or fossilized form of an adjectival suffix which is an intensifier.

- (225) ɕiɑuɤə 'earring'
 (226) səiɤɑŋ 'beautiful, pretty'

There are also two instances of /ɤ/ occurring before glides, given below. Example (228) has an alternate pronunciation where /ɤ/ does not occur before a glide.

- (227) ɑɤuəi 'wide, broad'
 (228) tuɤua ~ tuɤa 'post, pillar'

The phoneme /ɤ/ does not occur in mono-morphemic words of Chinese origin. The causative suffix /-ɤɑ/ may be encountered on numerous Chinese loans as in (229), but a morpheme break precedes the /ɤ/.

- (229) losɤɑ 'to be overelaborate' (from Chinese luōsuo + -ɤɑ)

ii) The phoneme /ɤ/ only occurs after vowels and nasals in mono-morphemic words of Mongolic origin and in a number of words of unknown origin. It does not appear in words of Chinese origin.

4.1.2.5 Sonorants

The sonorants are /m/, /n/, /ŋ/, /r/, /l/, /w/, and /j/. In mono-morphemic words of Mongolic origin in Santa, there is a constraint on adjacent sonorants across syllable boundaries. See section 3.2.3 for discussion of the adjacent sonorants constraint.

4.1.2.5.1 The phoneme /m/ = m

i) The phoneme /m/ occurs word-initially and after vowels in the C₁ position in words of Mongolic origin. It does not occur after nasals.

- (230) mori 'horse'
 (231) alima 'fruit, pear'

Phonemically, /m/ does not occur in the syllable coda. But phonetic occurrences of [m] may be encountered before /p/. Examples of this are given in (232) and (233). See section 4.1.2.1.5 for more on this.

- (232) nanbaŋ guʁi ‘a type of insect’
 /nanpaŋ quʁi/ → [nām'pāŋ qu'ʁi] unknown source/Santa
 (233) unba ‘to swim’ /unpa/ → [ūm'pa] ~ [ūn'pa]

There is one instance of /m/ occurring after a glide in (234).

- (234) nəimaŋ ‘eight’

There is also one instance of /m/ occurring before a glide in (235).

- (235) miəngu ‘silver’

In words of Chinese origin, /m/ occurs in the syllable onset in the C₁ position. This means it may occur after vowels, nasals, and glides in polysyllabic words as in the examples below. In addition, /m/ occurs before /j/ glides as in (239) and (240), but not before /w/ glides.

- (236) mindzu ‘nationality, ethnic group’
 (237) liumaŋ ‘hoodlum, hooligan, rogue’
 (238) zəŋmin ‘people’
 (239) bəimiən ‘north’
 (240) miəu ‘second (of time)’

ii) The distribution of /m/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /m/ does not occur after nasals in words of Mongolic origin but common in words of Chinese origin; b) /m/ rarely occurs after glides in words of Mongolic origin (one instance: (234)) but common in words of Chinese origin; and c) /m/ rarely occurs before glides in words of Mongolic origin (one instance: (235)) while in words of Chinese origin, /m/ occurs before /j/ glides but not before /w/ glides.

4.1.2.5.2 The phoneme /n/ = n

i) The phoneme /n/ occurs in the syllable onset in the C₁ position in words of Mongolic origin, but it does not occur after nasals or glides. /n/ occurs before /j/ glides as in (243), but not before /w/ glides. /n/ also occurs in the syllable coda in the C₃ position. Examples (244) and (245) illustrate syllable coda (before another syllable) and word-final distribution of /n/ respectively.

(241)	niə	‘one’
(242)	goni	‘sheep’
(243)	niu	‘to hide’
(244)	bundzu	‘sparrow, small bird’
(245)	kuən	‘foot’

In words of Chinese origin, /n/ occurs in the syllable coda as well as in the syllable onset in the C₁ position. It occurs after vowels as in (247), nasals as in (248), and glides as in (249) in polysyllabic words. /n/ also occurs before /j/ glides when in the C₁ position as in (250), but not before /w/ glides. Examples (251) and (252) illustrate syllable coda (before another syllable) and word-final distribution of /n/ respectively.

(246)	nuli	‘slave’
(247)	manəu	‘agate’
(248)	pəŋniau	‘roc (legendary bird of prey)’
(249)	xəuniən	‘year after next’
(250)	niəntəu	‘idea, thought’
(251)	dzundzu	‘pearl’
(252)	dzuən	‘brick’

In addition, /n/ occurs before glides when in the C₃ position as in (253) and (254). This occurs across syllable boundaries.

(253)	dziənji	‘proposal, suggestion’
(254)	çiənwo	‘whirlpool, vortex, eddy’

ii) The distribution of /n/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is quite similar. The differences are that a) /n/ does not occur after nasals in mono-morphemic words of Mongolic origin but common in words of Chinese origin; b) /n/ does not occur after glides in words of Mongolic origin and does occur in words of Chinese origin; and c) in words of Chinese origin /n/ occurs before glides across syllable boundaries while this does not occur in words of Mongolic origin.

4.1.2.5.3 The phoneme /ŋ/ = ɳ

i) The phoneme /ŋ/ only occurs in the syllable coda in the C₃ position in words of Mongolic origin. It does not occur before or after glides. It also does not occur before other nasals across syllable boundaries.

- | | | |
|-------|--------|------------|
| (255) | mɑŋləu | ‘forehead’ |
| (256) | kuŋ | ‘person’ |

In words of Chinese origin, /ŋ/ only occurs in the syllable coda in the C₃ position. It does not occur after glides.

- | | | |
|-------|--------|---------------|
| (257) | liŋdau | ‘leader’ |
| (258) | piŋ | ‘flat, level’ |

There are many instances of /ŋ/ occurring before glides and nasals across syllable boundaries in words of Chinese origin as in (259) and (260).

- | | | |
|-------|---------|------------------|
| (259) | xuɑŋjəu | ‘butter, grease’ |
| (260) | zʊŋniən | ‘leap year’ |

ii) The distribution of /ŋ/ in words of Mongolic origin and in words of Chinese origin is almost identical. The only difference is that in words of Chinese origin /ŋ/ occurs before glides and nasals across syllable boundaries but not for words of Mongolic origin.

4.1.2.5.4 The phoneme /ɾ/ = ɽ

i) The phoneme /ɾ/ only occurs after vowels and glides in the C₁ position in words of Mongolic origin. That means it does not occur word-initially or after nasals.

- | | | |
|-------|-------|---------------|
| (261) | irə | ‘to come’ |
| (262) | ʂəura | ‘soil, earth’ |

There are three instances of /ɾ/ occurring before /w/ glides given below, but there are no instances of /ɾ/ occurring before /j/ glides. In each of these cases, there is an alternative pronunciation. In (263) haron ‘ten’ is phonetically [har^wõŋ]. (See section 3.3.2.6 and 4.1.3.6 for more on /o/.) In (264) and (265), /ɾ/ occurs in the syllable coda and precedes /w/ across the syllable boundary. In the alternative pronunciations, /w/ has been deleted and /ɾ/ is now in the syllable onset.

- | | | |
|-------|--------------------|---------|
| (263) | haruan ~ haron | ‘ten’ |
| (264) | gurwan ~ guraŋ | ‘three’ |
| (265) | dʒiərwan ~ dʒiəraŋ | ‘four’ |

There are some instances of /ɾ/ occurring in the syllable coda. Examples (266) through (269) illustrate the only syllable coda instances of /ɾ/ which are not also word-final (Bu 1983). But each of these has an alternate pronunciation where either the /ɾ/ has been deleted as in (266), the following onset has been deleted so that /ɾ/ is the onset as in (267) and (268), or it has been syllabified with an epenthetic vowel so that /ɾ/ is the syllable onset rather than the syllable coda as in (269).

- | | | |
|-------|--------------------|----------------|
| (266) | marta ~ mata | ‘to forget’ |
| (267) | gurwan ~ guraŋ | ‘three’ |
| (268) | dʒiərwan ~ dʒiəraŋ | ‘four’ |
| (269) | guɾga ~ guɾiga | ‘Adam’s apple’ |

Examples (270) through (276) illustrate the only word-final instances of /r/ (Bu 1983). Examples (271) through (273) are lexicalized phrases and (274) through (276) are onomatopoetic in nature. Since syllable coda /r/ seems to be dispreferred by Santa speakers and is probably on its way out as being acceptable (see section 4.2 for more on Santa syllable structure), it is not surprising that the contexts in which it does occur are contexts in which it is more likely to be retained, i.e. lexicalized phrases and onomatopoetic words.

(270)	guar ~ gua	‘two’
(271)	guar udu	‘two days’
(272)	ənə guar udu	‘recently, the last two days’
(273)	giər ədzən	‘head of a household, host’
(274)	dər dər	‘sound used for calling horses, donkeys, and mules’
(275)	maɣar maɣar	‘sound used for calling sheep’
(276)	dʒir dʒir	‘depicts the sound of water in a brook’

My consultant considers many of the attested syllable coda instances of /r/ to be syllabified as [r̩]. The epenthetic insertion of [ɪ] allows /r/ to be syllabified as part of the following syllable onset rather than the previous syllable coda. The fact that there are two possible interpretations (with varying degrees of use and acceptance) with respect to the syllabification of /r/ is probably good evidence of a language change in process.

The phoneme /r/ does not occur in mono-morphemic words of Chinese origin. One can find words of Chinese origin with the suffix -rə ‘BVS’ attached, but a morpheme boundary precedes the /r/ as in (277).

(277)	minbərə	‘to come to realize’ (from Chinese <u>míngbó</u> + <u>-rə</u>)
-------	---------	---

ii) The phoneme /r/ only occurs after vowels and glides and occasionally in the syllable coda in mono-morphemic words of Mongolic origin. The phoneme /r/ does not occur in words of Chinese origin.

4.1.2.5.5 The phoneme /l/ = ʅ

i) The phoneme /l/ occurs in the syllable onset in the C₁ position in words of Mongolic origin. This means it may occur after vowels, nasals, or glides as the examples below demonstrate. In addition, /l/ occurs before /j/ glides as in (282), but it does not occur before /w/ glides.

(278)	latʂəŋ	‘leaf’
(279)	bula	‘spring’
(280)	maŋləu	‘forehead’
(281)	tauləi	‘rabbit, hare’
(282)	tulə	‘to scald, to burn’

However, there are only a few examples of /l/ following nasals in mono-morphemic words of Mongolic origin. Examples (283) and (284) are the only other instances from Bu (1983).

(283)	tʂanliə	‘to listen, to hear’
(284)	taŋləi	‘palate’

In words of Chinese origin, /l/ occurs in the syllable onset in the C₁ position. This means it may be found after vowels, nasals, or glides in polysyllabic words as in the examples below. In addition, /l/ occurs before glides as in (289).

(285)	lauʂi	‘teacher’
(286)	nuli	‘slave’
(287)	guŋlu	‘highway, road’
(288)	lauliŋ	‘woods, grove’
(289)	liəndau	‘sickle’

ii) The distribution of /l/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is quite similar. The differences are that a) /l/ rarely occurs after nasals in words of Mongolic origin while common in words of Chinese origin; and b) /l/ only occurs before /j/ glides in words of Mongolic origin while in words of Chinese origin, /l/ occurs before both /j/ and /w/ glides.

4.1.2.5.6 The phoneme /w/ = w, u

i) The phoneme /w/ occurs word-initially and after vowels in the C₂ position in words of Mongolic origin. /w/ also occurs in the syllable coda in the C₃ position as in (292). It does not occur after nasals.

- | | | |
|-------|------|-----------------------------|
| (290) | waka | ‘to wash, to bathe’ |
| (291) | jawu | ‘to walk, to go’ |
| (292) | sau | ‘to live, to dwell; to sit’ |

There is one instance of /w/ occurring after a glide, as in (293).

- | | | |
|-------|-------|--------|
| (293) | gəiwa | ‘easy’ |
|-------|-------|--------|

In words of Chinese origin, /w/ occurs in the syllable onset in the C₂ position and in the syllable coda in the C₃ position. This means it occurs after vowels, nasals, or glides in polysyllabic words as in the examples below.

- | | | |
|-------|---------|----------------------------------|
| (294) | waŋ | ‘net’ |
| (295) | təwu | ‘spy, special agent’ |
| (296) | zənwu | ‘assignment, job, mission, task’ |
| (297) | dʒiauwo | ‘kitchen’ |

/w/ does not occur before other glides in the C₂ position, but /w/ occurs before other glides across syllable boundaries when it is in the C₃ position as in (298).

- | | | | |
|-------|-------------|----------------------|---------------|
| (298) | biaujan giə | ‘to act, to perform’ | Chinese/Santa |
|-------|-------------|----------------------|---------------|

ii) The distribution of /w/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /w/ does not occur after nasals in words of Mongolic origin while in words of Chinese origin /w/ occurs after nasals across syllable boundaries; b) /w/ rarely occurs after glides in words of Mongolic origin across syllable boundaries when /w/ is in the C₂ position while in words of Chinese origin this does occur; and c) /w/ never occurs

before glides in words of Mongolic origin while in words of Chinese origin this occurs across syllable boundaries when /w/ is in the C₃ position.

4.1.2.5.7 The phoneme /j/ = *j̥ j̄*

i) The phoneme /j/ occurs word-initially and after vowels in the C₂ position in words of Mongolic origin. /j/ also occurs in the syllable coda in the C₃ position as in (301). When in the C₂ position, /j/ occurs after nasals which are in the C₁ position as in (302).

(299)	jasuŋ	‘bone, skeleton’
(300)	bajaŋ	‘rich, prosperous, wealthy’
(301)	baɪ	‘to stop, to stand’
(302)	nia	‘to glue, to stick’

There are three instances of /j/ occurring after a /j/ glide across syllable boundaries when it is in the C₂ position as in the examples below.²⁸

(303)	fəija	‘to tie, to fasten’
(304)	qəija	‘sheep grass’
(305)	təija	‘walking stick; club, cudgel, bludgeon’

In words of Chinese origin, /j/ occurs in the syllable onset in the C₂ position, and in the syllable coda in the C₃ position. This means it may occur after vowels, nasals, or glides in polysyllabic words as in the examples below.

(306)	jaŋsə	‘color’
(307)	daji	‘overcoat, topcoat’
(308)	ɕiaŋja	‘ivory’
(309)	gaujan	‘highland, plateau’

²⁸ Phonemically, the /j/ in these examples is geminated: /fəija/, /qəija/, and /təija/ respectively. These types of geminates are rare. Most geminates in words of Mongolic origin are disallowed by the adjacent sonorants constraint discussed in section 3.2.3 in Chapter 3.

/j/ does not occur before other glides in the C₂ position, but /j/ occurs before other glides across syllable boundaries when it is in the C₃ position as in (310).

(310) baiwan ‘one million’

ii) The distribution of /j/ in mono-morphemic words of Mongolic origin and in words of Chinese origin is similar. The differences are that a) /j/ does not occur after nasals across syllable boundaries in words of Mongolic origin while in words of Chinese origin /j/ does occur after nasals across syllable boundaries; b) /j/ rarely occurs after glides in words of Mongolic origin across syllable boundaries when /j/ is in the C₂ position while in words of Chinese origin this does occur; and c) /j/ rarely occurs before glides in words of Mongolic origin across syllable boundaries when /j/ is in the C₃ position while in words of Chinese origin this does occur.

4.1.2.6 Summary

The distribution of consonants for words of Mongolic and Chinese origin is quite varied. Some consonants like /p^h/, /f/, /x/ occur in words of both Mongolic and Chinese origin, but in words of Mongolic origin they only occur word-initially. Other consonants like /q^h/, /q/, /h/, /ʁ/, and /r/ only occur in words of Mongolic origin while the consonants /ts^h/, /ts/, and /z/ only occur in words of Chinese origin. The distribution of the remaining consonants is similar in words of both Mongolic and Chinese origins. Most of the differences in distribution that do occur are explained by the adjacent sonorants constraint and the homorganic nasal-stop constraint which generally only apply to words of Mongolic origin.

4.1.3 The vowel phonemes

There are 7 vowel phonemes in Santa /i, ʊ, u, ə, ɤ, o, ɑ/.

4.1.3.1 The phoneme /i/ = i

i) The phoneme /i/ occurs in the syllable nucleus in words of Mongolic origin. It occurs with the nasal codas /n/ and /ŋ/. It does not occur in vowel+glide/glide+vowel sequences. Some examples are given below.²⁹

i	(311)	əri	'to seek, to look for'
in	(312)	otɕin	'girl, daughter'
iŋ	(313)	amiŋ	'life, destiny, fate'

In words of Chinese origin, /i/ occurs in the syllable nucleus. It occurs with the nasal codas /n/ and /ŋ/. It does not occur in vowel+glide or glide+vowel sequences. Some examples are given below.

i	(314)	bi	'pen'
in	(315)	ɕin	'letter, mail'
iŋ	(316)	biŋ	'soldier'

In section 3.3.2.1 I discussed the phonetic variants of /i/. The influence of Chinese is evident here. In Chinese, after /tɕ^h/, /tɕ/, /ɕ/, and /z/ only [ɿ] occurs; after /ts^h/, /ts/, and /s/ only [ɪ] occurs; and after /tɕ^h/, /tɕ/, and /ɕ/, [i] or /j/ occurs. This situation in Santa is identical to the one found in Chinese.

ii) The distribution of /i/ in words of Mongolic origin and in words of Chinese origin is quite similar. Even the distribution of the phonetic variants of /i/ in words of Mongolic and Chinese origin is identical.³⁰ This has come about through language contact with Hui.

²⁹ In this section, segments preceding the example number are in phonemic transcription. '//' are not used here.

³⁰ This does not include the voiceless variants.

4.1.3.2 The phoneme /ʊ/ = ʊ

i) The phoneme /ʊ/ occurs in the syllable nucleus in words of Mongolic origin. It occurs with the nasal codas /n/ and /ŋ/ as in (318) and (319), but these are the only instances. It does not occur in vowel+glide or glide+vowel sequences.

ʊ	(317)	qʷʊʂiʁəʊ	‘stairs, steps, ladder’
ʊn	(318)	əʁʊndu	‘to fight, to go to war’
ʊŋ	(319)	ɣʊŋʁi	‘sparrow hawk, kite (bird)’

The phoneme /ʊ/ does not occur in words of Chinese origin.

ii) The phoneme /ʊ/ only occurs in words of Mongolic origin and usually in only CV syllables with only two instances of nasal codas. It does not occur in words of Chinese origin.

4.1.3.3 The phoneme /u/ = u

i) The phoneme /u/ occurs in the syllable nucleus in words of Mongolic origin. It occurs with the nasal codas /n/ and /ŋ/. It also occurs in glide+vowel sequences with pre-vocalic /j/ glides. It does not occur in vowel+glide sequences, nor does it occur with both a pre-vocalic glide and the nasal coda at the same time. Some examples are given below.

u	(320)	udu	‘day’
un	(321)	gun	‘deep’
uŋ	(322)	usuŋ	‘hair, feather’
ju	(323)	niu	‘to hide’

In words of Chinese origin, /u/ occurs in the syllable nucleus. It occurs with the nasal codas /n/ and /ŋ/. It also occurs in glide+vowel sequences with pre-vocalic /j/ glides. It does not occur in vowel+glide sequences, nor does it occur with both a pre-vocalic glide and the nasal coda at the same time. Some examples are given below.

u	(324)	xu	'kettle, pot'
un	(325)	sundzi	'grandson'
uŋ	(326)	duŋɕiaŋ	'Dongxiang, Santa'
ju	(327)	tɕiu	'autumn'

ii) The distribution of /u/ in words of Mongolic origin and in words of Chinese origin is identical.

4.1.3.4 The phoneme /ə/ = ə

i) The phoneme /ə/ occurs in the syllable nucleus in words of Mongolic origin. It occurs with the nasal codas /n/ and /ŋ/ as in (329) and (330). It also occurs in glide+vowel sequences with a pre-vocalic /j/ glide as in (329) and (331), and in vowel+glide sequences with a post-vocalic /j/ or /w/ glide as in (332) and (333). In addition, it occurs in glide+vowel+glide sequences with both a pre-vocalic /w/ glide and a post-vocalic /j/ glide as in (334). Moreover, it occurs with a pre-vocalic /j/ glide and a nasal coda as in (335).

ə	(328)	ənə	'this'
ən	(329)	fəntɕiə	'to smell, to sniff, to scent'
əŋ	(330)	ɕudzəŋ	'neck'
jə	(331)	jəsun	'nine'
əj	(332)	nəimaŋ	'eight'
əw	(333)	qurəu	'frost'
wəj	(334)	wəitaŋ	'narrow'
jən	(335)	niŋkiən	'thin, flimsy'

There is one example of /ə/ occurring with a pre-vocalic /w/ glide as in (336).

wə	(336)	kəwə	'bran'
----	-------	------	--------

In words of Chinese origin, /ə/ occurs in the syllable nucleus. It occurs with the nasal codas /n/ and /ŋ/ as in (338) and (339). It also occurs in glide+vowel sequences with a pre-vocalic /j/ glide as in (340) and in vowel+glide

sequences with a post-vocalic /j/ or /w/ glide as in (341) and (342). In addition, it occurs in glide+vowel+glide sequences with both a pre-vocalic /w/ glide and a post-vocalic /j/ glide as in (343). Moreover, it occurs with a pre-vocalic /j/ glide and a nasal coda as in (344).

ə	(337)	tə	‘too much, excessive’
ən	(338)	bəndzi	‘book, notebook’
əŋ	(339)	dəŋ	‘stirrup’
jə	(340)	ɕiə	‘crab’
əj	(341)	məi	‘coal’
əw	(342)	dəufu	‘tofu, bean curd’
wəj	(343)	dzuəi	‘crime, guilt, sin, fault, blame’
jən	(344)	dʒiən	‘electricity’

ii) The distribution of /ə/ in words of Mongolic origin and in words of Chinese origin is almost identical.

4.1.3.5 The phoneme /ʂ/ = ʂ

i) The phoneme /ʂ/ occurs in the syllable nucleus in words of Mongolic origin without an onset, but it is very rare. It does not occur with nasal codas, nor does it occur in glide+vowel or vowel+glide sequences.

There are two words of Mongolic origin which have /ʂ/. In both instances, /ʂ/ is syllabified as its own syllable.

ʂ	(345)	tɕiʂgə	‘vehicle’
ʂ	(346)	tʂinʂ	‘day after tomorrow’

Comparative and historical evidence shows that /ʂ/ in (345) corresponds to /r/ as can be seen in (347). The influence of Chinese has probably caused the reanalysis of the Mongolic syllable coda /r/ into /ʂ/ in Santa. It is syllabified as its own syllable and therefore does not conflict with Santa syllable coda constraints. See section 4.1.2.5.4 for more on the phoneme /r/ and section 4.2 for more on Santa syllable structure.

(347)	(Kuribayashi 1989:358)		
	Script M.	terge(n)	‘vehicle, cart’
	Mongolian	tərǣg	
	Dagur	təræg	
	E. Yugur	terɣen	
	Monguor	tərgex	
	Baonan	tʂədzi (Chinese loan)	
	Santa	teiǣgə	

In words of Chinese origin, /ǣ/ occurs in the syllable nucleus without an onset. It does not occur with nasal codas, nor does it occur in glide+vowel or vowel+glide sequences. Some examples are given below.

ǣ	(348)	ǣʂi	‘twenty’
ǣ	(349)	dzauǣ	‘jujube, Chinese date’

ii) The distribution of /ǣ/ in words of Mongolic origin and in words of Chinese origin is quite similar. However, the presence of /ǣ/ in words of Mongolic origin is quite rare, and is probably solely due to the influence of Chinese.

4.1.3.6 The phoneme /o/ = o

i) The phoneme /o/ occurs in the syllable nucleus in words of Mongolic origin. It occurs with the nasal codas /n/ and /ŋ/. It does not occur in glide+vowel or vowel+glide sequences. Some examples are given below.

o	(350)	no	‘lake, pond’
on	(351)	gondziə	‘to suffer from the cold, to suffer frostbite’
oŋ	(352)	oloŋ	‘many, much, a lot’

In words of Chinese origin, /o/ occurs in the syllable nucleus. It does not occur with nasal codas. In pinyin, the romanized transcription system used in the People’s Republic of China, words with this vowel are transcribed with both o and uo. The difference is that o is used after y, w, b, p, m, f, and the zero initial

whereas uo is used after all other initials. In the Santa transcription system, these are all represented using o, not uo. This is because the pre-vocalic labialization [ʷ] that usually occurs before [o] patterns phonetically and not phonemically as a pre-vocalic /w/ glide. Therefore, in my analysis, words of Chinese origin with the vowel /o/ do not occur in glide+vowel or vowel+glide sequences. Some examples are given below.

- o (353) po 'broken, damaged' /p^ho/ → [p^{hw}o]
(from Chinese pò)
- o (354) loto 'camel' /lot^ho/ → [l^wo't^{hw}o]
(from Chinese luòtuō)
- o (355) tsoban 'washboard' /ts^hopan/ → [ts^{hw}o'pæn]
(from Chinese cuōbǎn)

ii) The distribution of /o/ in words of Mongolic origin and in words of Chinese origin is similar. The only difference is that /o/ occurs with nasal codas in words of Mongolic origin while it does not in words of Chinese origin.

4.1.3.7 The phoneme /a/ = a

i) The phoneme /a/ occurs in the syllable nucleus in words of Mongolic origin. It occurs with the nasal codas /n/ and /ŋ/as in (357) and (358). It also occurs in glide+vowel sequences as in (359) and (360) and in vowel+glide sequences as in (361) and (362). In addition, it occurs in glide+vowel+glide sequences as in (363) and (364). Moreover, /a/ occurs with both a pre-vocalic glide and a nasal coda as in (365) through (367).

a	(356)	asa	'to ask'
an	(357)	giəran	'bright, shiny, luminous'
aŋ	(358)	baŋ	'honey'
ja	(359)	jasuŋ	'bone, skeleton'
wa	(360)	qawa	'nose'
aj	(361)	kai	'wind'
aw	(362)	tau	'to catch up with, to overtake'
jaw	(363)	tɕiauruŋ	'head'
waj	(364)	quaitɕəŋ	'old, worn, used'
jaŋ	(365)	bajaŋ	'rich, wealthy, prosperous, well-off' ³¹
wan	(366)	kuan	'foot'
waŋ	(367)	guaŋgiən	'hard working'

In words of Chinese origin, /a/ occurs in the syllable nucleus. It occurs with the nasal codas /n/ and /ŋ/ as in (369) and (370). It also occurs in glide+vowel sequences as in (371) and (372) and in vowel+glide sequences as in (373) and (374). In addition, it occurs in glide+vowel+glide sequences as in (375) and (376). Moreover, /a/ occurs with both a pre-vocalic glides and a nasal coda as in (377) through (379).

³¹ This is the only one that does not allow a consonantal onset in the C1 position of the syllable.

a	(368)	ba	'dam, dike'
an	(369)	dan	'carrying pole and the loads on it'
aŋ	(370)	gaŋ	'jar, vat, crock'
ja	(371)	ɕia	'gorge'
wa	(372)	gua	'melon'
aj	(373)	naidzi	'milk, breast'
aw	(374)	baubau	'package, parcel'
jaw	(375)	miau	'second (of time)'
waj	(376)	jauguai	'demon, monster, goblin'
jaŋ	(377)	mudziaŋ	'carpenter, woodworker'
wan	(378)	tʂuan	'boat, ship'
waŋ	(379)	ʂuaŋ	'pair'

ii) The distribution of /a/ in words of Mongolic origin and in words of Chinese origin is almost identical.

4.1.3.8 Summary

The distribution of the vowels for words of Mongolic and Chinese origin is almost identical. This similarity is a result of heavy influence from Hui. This situation will be discussed in the next section where the issue Santa syllable structure and language contact is taken up in more depth.

4.2 Santa syllable structure and the effects of language contact ³²

In this section, I will discuss the effect of contact-induced language change on the Santa syllable. See Chapter 2 for a discussion of current socio-historical factors that promote language contact between the Santa and the Linxia Hui.

The effect of language contact on the Santa syllable manifests itself in two primary types of evidence. The first type of evidence is the effect on the basic

³² This section of the dissertation was first presented at the Second UCSB East Asian Linguistics Workshop, May 1, 1993 and then again at the LASSO conference in Houston, TX on October 22nd, 1994.

structure of the Santa syllable. This is shown chiefly in the movement away from the typical Mongolic syllable type to the Mandarin Chinese syllable type. The second type of evidence is the effect on the Santa syllable inventory. This is exhibited in the overall similarity between the Santa and Hui syllable inventories.

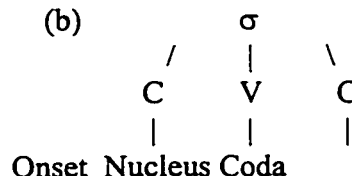
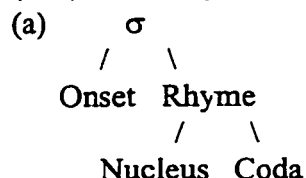
In section 4.2.1 I will give a general account of comparative Mongolic syllable structure. In section 4.2.2 I will give a detailed account of Santa syllable structure and discuss how it differs from Mongolic as a whole. In section 4.2.3 I will give a detailed account of Hui syllable structure and its similarities to Santa. In section 4.2.4 I will compare the Santa and Hui syllable inventories and show that they overlap to an unusually large degree. In section 4.2.5 I will look solely at the Santa syllable inventory and show the number of syllable types shared by words of both Mongolic and Chinese origin. Finally, in section 4.2.6 I will use comparative Mongolic evidence to illustrate how the Santa syllable structure might have evolved from the Mongolic type into the Mandarin Chinese type.

4.2.1 Comparative Mongolic Syllable Structure

I will look at six languages in the Mongolic language family and their respective syllable structures. These six languages are 1) Mongolian (the language spoken by the people of both Inner and Outer Mongolia); 2) Dagur (spoken in northeastern China near the eastern tip of Outer Mongolia); 3) Eastern Yugur; 4) Monguor; 5) Baonan; and 6) Santa, the latter four being spoken in the Gansu-Qinghai border region in northwestern China.

Before I give a general overview of Mongolic syllable structure, I want to briefly review the major component parts of the syllable.

(380) Basic syllable structure



Example (380)(a) illustrates the traditional hierarchical viewpoint of the syllable. Example (380)(b) illustrates the autosegmental viewpoint (Clements and Keyser 1983). In both, the onset may consist of one or more consonants, the nucleus may consist of one or more syllabic elements, and the coda may consist of one or more consonants. The basic difference between these two is the rhyme found in (380)(a) but not in (380)(b). I will be thinking in terms of (380)(b), in this paper, since I have not yet found any phonological significance for the rhyme in Santa. See section 4.3 for evidence that syllable weight places no role in the Santa stress system.

Syllable structure is language specific. In other words, each language has its own systematic limitations on which types of syllables are acceptable and which types are not. These limitations are best formalized in the maximal syllable template which shows a) the maximal allowable syllable; b) the syllable types that may be derived from the template; and c) the phonotactic limitations on particular segments.

4.2.1.1 Mongolian syllable structure

The maximal syllable template for Mongolian is illustrated in (381). Mongolian is spoken by over 3 million people in both Mongolia and Inner Mongolia province in China (Language Atlas of China 1988).

- (381) Mongolian maximal syllable template (Derived from Daobu 1983)
- $$(C_1)V_1(V_2)(C_2)(C_3)$$
- C_1 = any consonant
 if $V_1 V_2$ then $V_1 V_2$ = long vowel or complex vowel
 C_2 = b, g, s, x, m, n, ŋ, l, r, (n^j , $ŋ^j$, l^j , r^j)
 C_3 = b, d, g, t, s, ʃ, x, dʒ, tʃ, (d^j , g^j , x^j)

Consonant clusters are allowed in the syllable coda, but there are some restrictions on which consonants may appear in clusters and what sequence they may appear in. Long vowels and complex vowels may also appear in the syllable nucleus.

4.2.1.2 Dagur syllable structure

The maximal syllable template for Dagur is illustrated in (382). Dagur is spoken in Heilongjiang province in the northeastern tip of Mongolia. There are an estimated 60,000 speakers (Language Atlas of China 1988).

(382) Dagur maximal syllable template (Derived from Zhong Suchun 1982 and Enhebatu 1988)

$(C_1)V_1(V_2)(C_2)(C_3)$

C_1 = any consonant

if $V_1 V_2$ then $V_1 V_2$ = long vowel or complex vowel

C_2 = b, g (ɣ), m, n, l, r, j

C_3 = d, p, t, k, s, ʃ, dʒ, tʃ

Comparing (382) with the maximal syllable template for Mongolian in (381) above, it is evident that they are very similar. Both allow consonant clusters in the syllable coda and both allow long or complex vowels in the syllable nucleus. The major difference lies in the list of consonants which may appear in the coda.

4.2.1.3 Eastern Yugur syllable structure

The maximal syllable template for Eastern Yugur is illustrated in (383). Eastern Yugur is spoken near the border region of Gansu and Qinghai provinces north of Lanzhou. There are an estimated 4000 speakers (Language Atlas of China 1988).

(383) Eastern Yugur maximal syllable template (Derived from Zhaonasiu 1981a)

$(C_1)(C_2)V_1(V_2)(C_3)$

if $C_1 C_2$ then C_1 = s, ʃ, x, h, m, n, ŋ, t, r

C_2 = b, d, g, ɣ, dʒ

if $V_1 V_2$ then $V_1 V_2$ = long vowel or complex vowel

C_3 = b, d, g, ɣ, s, ʃ, m, n, ŋ, l, r

Comparing (383) with (381) and (382) above, there is a clear distinction. We have just seen that consonant clusters are allowed in the syllable coda in Mongolian and Dagur, but in Eastern Yugur, the consonants clusters are only allowed in the onset. But comparing the list of consonants that may appear in the coda, they overlap to a considerable degree with those allowed in the coda for Mongolian and Dagur.

4.2.1.4 Monguor (Tu) syllable structure

The maximal syllable template for Monguor (or Tu) is illustrated in (384). Monguor is spoken in mainly Qinghai province near the Gansu/Qinghai border region. There is also a small community in Gansu in the same region. There are an estimated 90,000 speakers split between two dialects: Huzhu 60,000 and Minhe 30,000 (Language Atlas of China 1988). The data in this section is representative of the Huzhu dialect (Keith Slater, person communication).

(384) Monguor (Tu) maximal syllable template (Derived from Zhaonasiu 1981b)

$(C_1)(C_2)V_1(V_2)(C_3)$

if $C_1 C_2$ then $C_1 = s, \text{ʃ}, \text{ɕ}, x, m, n, \eta, r$

$C_2 = b, d, g, \text{ɣ}, p, t, k, \text{dz}, \text{dz}_l, \text{dʒ}, \text{tʃ}, \text{tɕ}$

if $V_1 V_2$ then $V_1 V_2 = \text{long vowel or complex vowel}$

$C_3 = b, d, g, \text{ɣ}, s, \text{ɕ}, \text{ʃ}, m, n, \eta, l, r$

Comparing (384) with (383), it is obvious that they are similar. Consonant clusters are allowed only in the onset. The consonants that may appear in these clusters are similar for C_1 but vary somewhat for C_2 . The consonants that may appear in the coda are almost identical to those for Eastern Yugur.

4.2.1.5 Baonan syllable structure

The maximal syllable template for Baonan is illustrated in (385). Baonan is spoken in the Gansu/Qinghai border region to the west of Linxia. There are two main dialects. The Tongren dialect in Qinghai province with an estimated 4000

speakers has been heavily influenced by Tibetan. The Dahejia dialect in Gansu province has an estimated 6000 speakers and has been heavily influence by Linxia Hui (Language Atlas of China 1988).

(385) Baonan maximal syllable template (Derived from Bu He and Liu Zhaoxiong 1982)

$(C_1)(C_2)V_1(V_2)(C_3)(C_4)$

if $C_1 C_2$ then $C_1 = t, f, s, \chi, m, n, \eta$

$C_2 = b, d, g, t, dz, dz$

if $V_1 V_2$ then $V_1 V_2 = \text{complex vowel}$

if only C_3 then $C_3 = b, d, g, \text{G}, s, \text{c}, \chi, t\text{c}, m, n, \eta, l, r$

if $C_3 C_4$ then $C_3 = l, r$

$C_4 = t\text{c}$

The Baonan maximal syllable template differs from those which we have examined previously in two ways.³³ First, there are no long vowels, only complex ones. And secondly, clusters are allowed in the coda, but only of a very limited type where \underline{l} or \underline{r} is the first member and $\underline{t\text{c}}$ is the last member of the cluster. Moreover, $\underline{t\text{c}}$ is a morpheme, thus a morpheme boundary is involved here where previously one was not, i.e. in Mongolian and Dagur. Otherwise, the list of consonants allowed in a simple coda are very similar to those we have seen before.

³³ The sources on Baonan disagree to some extent. This disagreement is primarily due to the existence of two different dialects — the Dahejia dialect which has been influenced chiefly by Hui (described for the most part in Bu He and Liu Zhaoxiong (1982)) and the Tongren dialect which has been influenced chiefly by Tibetan (described for the most part in Chen Naixiong (1987)). I have elected to use Bu He and Liu Zhaoxiong (1982) because it is a part of the series in which most of the other syllable structure data for this section has been drawn.

Chen Naixiong (1987) disagrees in whether a) Baonan has long vowels or not; and b) the list of consonants found in $C_1 C_2$ clusters. However, these dialectal differences do not affect the results of this study to any large degree.

To summarize what we have encountered so far, Mongolian and Dagur allow consonant clusters in the coda (I consider Baonan borderline here since clusters arise in the coda from one specific morpheme) and Eastern Yugur, Monguor, and Baonan allow consonant clusters in the onset. Is there a correlation for this split? In fact, Mongolian and Dagur are initial stress languages (that is, the first syllable of the word receives the stress) and Eastern Yugur, Monguor, and Baonan are ultimate stress languages (that is, the stress falls on the last syllable of the word). My hypothesis is that in the initial stress languages, an unstressed vowel may have been lost in the final syllable of a two syllable word resulting in a consonant cluster as in (386)(a).

(386)(a) Initial stress languages
'CVCvC \Rightarrow 'CVCC

(386)(b) Ultimate stress languages
Cv'CVC \Rightarrow 'CCVC

Conversely, in ultimate stress languages, an unstressed vowel may have been lost in the first syllable resulting in a consonant cluster as in (386)(b).

Some examples are given in (387).

(387) (Kuribayashi 1989: 226, 211, 204, 249)

	a) 'to wear'	b) 'wine'	c) 'to be able'	d) 'ox, cow'
Script M.	emüs	darasu(n)	čida	hüker
Mongolian	omsön	dars	ʃadän	uxär
Dagur	əms	arigj	ʃad	χukur
E. Yugur	məs	xuaŋdzu	ʃda	hgor
Monguor	musə	dəraasə	ʃda	fugor
Baonan	musi	--	--	fgor, gor
Santa	musi, misi	darasuŋ	ʃida ³⁴	fugiaə

In (387)(a) the first vowel has been retained in Script Mongolian, Mongolian, and Dagur, the initial stress languages. The vowel /ü/ has been lost in the modern languages Mongolian and Dugur creating a /ms/ sequence. The

³⁴ Not given in Kuribayashi (1989).

ultimate stress languages all retain a corresponding vowel. In Santa, both /u/ and /i/ are possible. In (387)(b) the consonant cluster /rs/ in the coda has resulted from the loss of the vowel /a/ and the final syllable in Mongolian. This vowel is retained in both Monguor and Santa.

In (387)(c) the first vowel has been lost in Eastern Yugur and Monguor, creating a consonant cluster in the onset. In (387)(d) the vowel /u/ has been lost in Eastern Yugur and Baonan, creating consonant clusters in the onset.

This phenomenon has only been touched on here, but it deserves further attention and analysis. If this hypothesis basically proves to be correct, then it may be an indication of how deep the stress dichotomy in Mongolic really is.

4.2.2 Santa syllable structure

The maximal syllable template for Santa is illustrated in (388).

(388) Santa maximal syllable template (A)

$(C_1)(C_2)V_1(C_3)$

$C_1 \neq \eta, j, w$

$C_2 = j, w$

$C_3 = n, \eta, j, w, (r)$

Comparing (388) with the Mongolic syllable templates mentioned above, it is clear that Santa bears almost no resemblance to the rest of Mongolic. Consonant clusters are restricted to the onset (this is what one expects because Santa is an ultimate stress language), but the C_2 of these clusters is limited to glides. There are no long vowels and no complex vowels. The consonants that may appear in the coda are limited to nasals, and glides (and occasionally r ; this will be discussed below). This differs dramatically from the rest of Mongolic.

Another way to represent the Santa maximal syllable template is repeated in (389) where C is [+consonantal]; G is [-consonantal, -syllabic]; V is [+syllabic]; and N is [+nasal].

(389) Santa maximal syllable template (B)³⁵

$$(C)(G)V(\left\{ \begin{matrix} G \\ N \end{matrix} \right\})$$

C = [+ consonantal], G = [- consonantal, - syllabic],

V = [+ syllabic], N = [+ nasal]

In other words, the maximal syllable type consists of a consonantal onset followed by a glide followed by the vocalic nucleus followed by a glide *or* a nasal in the coda. Only the vowel of the nucleus is obligatory. Everything else is optional. Example (390) illustrates the possible syllable types that are derived from this maximal syllable template:

(390) Possible Santa syllable types

V	CV	GV	CGV
VG	CVG	GVG	CGVG
VN	CVN	GVN	CGVN

Each of the twelve possibilities is illustrated in example (391). None of these words are Chinese loans. They are all indigenous to Mongolic. The relevant syllables are underlined.

³⁵ See footnote 22 on page 59.

(391) Santa syllable type examples:

V	<u>a</u> lima	'fruit'
VG	<u>ai</u>	'(INTERJECTION EXPRESSING AGREEMENT)'
VN	<u>ə</u> ndzəkə	'donkey'
CV	nəŋ <u>ga</u>	'the Han nationality'
CVG	səi <u>ka</u> ŋ	'beautiful, handsome'
CVN	mo <u>ra</u> n	'river'
GV	jəsu <u>ŋ</u>	'nine'
GVG	awə <u>i</u>	'father'
GVN	jə <u>ŋ</u>	'what'
CGV	fug <u>iə</u>	'large, big'
CGVG	kuəi <u>su</u> ŋ	'navel'
CGVN	kiəli <u>ə</u> n	'speech, language'

It should also be noted here that I am simplifying the issue by claiming that all Santa syllables fit into just these twelve types. In fact, there are words which seem to contradict the Santa syllable structure which I have just outlined, mainly those with r in the coda. I will return to this issue when I address the historical changes that may have led to the present situation in the Santa syllable in section 4.2.6.

4.2.3 Hui syllable structure

The Hui maximal syllable template is found in (392).

(392) Hui maximal syllable template

$$(C)(G)V(\left\{ \begin{matrix} G \\ N \end{matrix} \right\})$$

C = [+ consonantal], G = [- consonantal, - syllabic],

V = [+ syllabic], N = [+ nasal]

Comparing example (392) with (389), one sees that the Hui and Santa maximal syllable templates are, in fact, identical. Therefore, the twelve possible

syllable types derived from example (392) for Hui are identical to Santa as well. These twelve types are found in example (390) above. Each of these twelve possibilities is illustrated in example (393).

(393) Hui syllable type examples:

V	a	24	'(USED BEFORE A KINSHIP TERM OR PERSONAL NAME)'
VG	ou	24	'vomit'
VN ³⁶			
CV	ma	44	'horse'
CVG	mei	24	'coal'
CVN	gaŋ	24	'steel'
GV	jy	44	'rain'
GVG	jao	42	'to bite'
GVN	jiŋ	24	'hawk'
CGV	guo	24	'country'
CGVG	xuai	42	'bad'
CGVN	dzuən	24	'expert'

From these initial encounters with the Santa and Hui syllable, we see that they appear almost identical in structure. The obvious question is, why are they identical since genetically Santa and Hui are descended from unrelated language families? The answer is contact-induced language change. In section 4.2.6, we will look at the likely historical linguistic changes that led to the present situation in Santa. But first, I want to discuss the similarities between the Santa and Hui syllable inventories.

³⁶ Notice that there is a hole for VN type syllables. Many of these have /n/ onsets in Hui, for example /aŋ/ which means 'peace' is pronounced /naŋ/ in Hui and is the same /naŋ/ found in the name Baonan. For more on this process in Santa, see section 3.2.5.

4.2.4 The Santa and Hui syllable inventories


The main purpose of Table 4.2.(a) through (c) is to compare the Santa and the Hui syllable inventories and see where there is overlap. The layout for these tables (commonly encountered in the presentation of Chinese syllable inventories) is based in part on *The Pocket English-Chinese Dictionary: Table of the Combinations of the Initials and Finals* (Wang, Zhu, and Ren 1987). In the first column on the left hand side of each table are the initials for Santa. Across the top are the finals.³⁷ I have identified 445 syllable types in Santa so far. According to the *Table of the Combinations of the Initials and Finals*, there are 409 syllables in Mandarin Chinese. (This does not take tone into account). Since in Hui, the phones d and t are palatalized before [i], 11 of the Mandarin syllables have merged with those beginning with dz and tc. In addition, I have chosen not to include the syllable type which is represented in pinyin as ê which is phonetically something like [ɛ]. This syllable is extremely rare and only occurs in interjections. This leaves 397 syllable types in the Hui syllable inventory. Unfortunately, my data for Hui is incomplete.³⁸ Because of this, I have only been able to identify 294 or 74% of the 397 syllables that I would expect to find in Hui. This means that there are still 103 syllables that I have not yet identified in Hui. However, I want to emphasize that a large number of these syllables are, in fact, rare in Mandarin with sometimes only one or two characters representing each syllable. Therefore, with the data that I have, it is not surprising that I have not encountered every syllable. This *does not mean* that they do not exist in Hui. Therefore, I have chosen to compare the Santa syllable inventory with the 397 syllable inventory that I would expect to find in Hui.

Example (394) is a key to Table 4.2.(a) through (c) and should clarify what I am trying to illustrate in these tables.

³⁷ Notice that initial does not necessarily equal onset and final does not necessarily equal syllable rhyme - in the traditional sense of the syllable - when the inventory is presented in this way.


³⁸ Data for Hui was also collected during my research trips to Gansu in the summer of 1990 and the fall of 1991, but data collected by Charles N. Li on Hui has proved invaluable.

(394) Key to the Santa and Hui syllable inventory Table 4.2.(a), (b), and (c)

 dzi syllable in both Santa and Hui

 ka syllable only in Santa

 \\\ syllable only in Hui

 syllable in neither Hui nor Santa

The first square, with the syllable dzi, shows a syllable found in *both* Santa and Hui (notice that this square is not shaded); the second square, with the syllable ka, shows a syllable found *only* in Santa (notice that this square is lightly shaded); the third square, with '\\\' in it , shows a syllable found only in Hui (one identifies which syllable this is by locating its position in the table); the fourth square represents syllables found in neither Hui nor Santa (notice that this square is darkly shaded).

	a	ai	au	an	anj	ə	ei	eu	en	enj	ɐ
Ø	a	ai		an	anj	ə			an	anj	ɐ
j	ja		jau	jan	janj	ja		jau			
w	wa	wai		wan	wanj	wə	wai		wan		
b	ba	bai	bau	ban	banj	bə	bai		ban	banj	
p	pa	pai	pau	pan	panj	pə	pai		pan	panj	
m	ma	mai	mau	man	manj	mə	mai		man	manj	
f	fa			fan	fanj	fə	fai		fan	fanj	
d	da	dai	dau	dan	danj	də	dai	dau	dan	danj	
t	ta	tai	tau	tan	tanj	tə	tai	tau	tan	tanj	
n	na	nai	nau	nan	nanj	nə	nai	nau	nan	nanj	
l	la	lai	lau	lan	lanj	lə	lai	lau			
r	ra		rau	ran	ranj	rə		rau	ran	ranj	
dz	dza	dzai	dzau	dzan	dzanj	dzə	dzai	dzau			
ts	tʂa	tʂai			tʂanj						
s	sa	sai	sau	san	sanj	sə	sai	sau		soj	
dz	dʒa	dʒai	dʒau	dʒan	dʒanj	dʒə		dʒau	dʒan	dʒanj	
tʂ	tʂa	tʂai	tʂau	tʂan	tʂanj	tʂə		tʂau	tʂan	tʂanj	
ʂ	ʂa		ʂau	ʂan	ʂanj	ʂə	ʂai	ʂau	ʂan	ʂanj	
ʐ				ʐan	ʐanj	ʐə		ʐau	ʐan	ʐanj	
dz											
tɕ											
ɕ											
g	ga	gai	gau	gan	ganj	gə		gau	gan	ganj	
k	ka	kai	kau		kanj	kə		kau			
x	xa	xai	xau	xan	xanj	xə	xai	xau	xan	xanj	
ɕi	ɕa			ɕan	ɕanj	ɕə	ɕai			ɕanj	
q	qa	qai		qan	qanj		qai				
ɣ	ɣa			ɣan	ɣanj	ɣə	ɣai	ɣau	ɣan	ɣanj	
h	ha			han	hanj	hə		hau	han		hə

Table 4.2.(a): Santa syllable inventory (with reference to the Hui syllable inventory)

	i	in	in	ia	ian	ia	ian	ia	ian	iu	iau	ü	ün	üo	uön
Ø	i		in												
j	ji	jín	jín									ü	ün	üo	üön
w	wi														
b	bi	bin	bin		bion	bia					biau				
p	pi	pin	pin	pia	pion	ü					piau				
m	mi	min	min		mion	mia				ü	miau				
f															
d															
t															
n	ni	nín	nín	nía	nion	nio	nion	nio	nion	niu	niau	ü		üo	
l	li	lín	lín	lia	lion	lio	lion	lio	lion	liu	liau	ü		üo	
r	ri														
dz	dzi														
ts	tsi														
s	si														
dʒ	dʒi														
tʃ	tʃi														
ʃ	ʃi														
ʒ	ʒi														
dʒ	dʒi	dʒin	dʒin	dʒia	dʒion	dʒio	dʒion	dʒio	dʒion	dʒiu	dʒiau	ü	ün	üo	üön
tʃ	tʃi	tʃin	tʃin	ü	tʃion	tʃio	tʃion	tʃio	tʃion	tʃiu	tʃiau	ü	ün	üo	üön
ɕ	ɕi	ɕin	ɕin	ɕia	ɕion	ɕio	ɕion	ɕio	ɕion	ɕiu	ɕiau	ü	ün	üo	üön
g	gi				gion	gio	gion	gio	gion						
k	ki				kion	kio	kion	kio	kion						
x															
ɕi	ɕi														
q															
ɣ	ɣi														
h															

Table 4.2.(b): Santa syllable inventory (with reference to the Hui syllable inventory)

	o	on	on	u	uo	un	un	uan	uai	uai	ui	uin	uin
Ø	o		on	u		un							
j	u			ju		jun	juan						
w	wo			wu									
b	bo			bu		bun							
p	po			pu							pu		
m	mo		mon	mu		mun							
f	u			fu		fun	fun						
d	do		don	du		dun	dun	duan		duai			
t	to		ton	tu		tu	tun	tuan		tuai	tiu		
n	no	non		nu		nu	nu	nu					
l	lo	lon	lon	lu		lun	lun	luan		luai			
r	ro		ron	ru	rua	run	run	ruan					
dz	dzo			dzu		dzun	dzun	dzuai		dzuai			
ts	tso			tsu		tsun	tsun	tsuan		tsuai			
s	so		son	su		sun	sun	suan		sui			
dz	dzo			dzu	dzuai	dzun	dzun	dzuai	duai	duai			
ts	tso			tsu	tsuai	tsun	tsun	tsuan	tsuai	tsuai			
ʒ	ʒo			ʒu	ʒuai	ʒun	ʒun	ʒuan	ʒuai	ʒuai			
z	zo			zu	zu	zun	zun	zuan	zui	zui			
dz	dzo												
ts	tso												
ʒ	ʒo												
g	go	gon	gon	gu	gua	gun	gun	guan	guai	guai			
k	ko			ku	kua	kun	kun	kuai	kuai	kuai	ku		
x	xo		xon	xu	xua	xun	xun	xuan	xuai	xuai			
ɣ	ɣo		ɣon	ɣu	ɣua	ɣun	ɣun	ɣuan	ɣuai	ɣuai	ɣu	ɣu	ɣu
q	qo			qu					quai	quai	qu	qu	qu
ʁ	ʁo		ʁon	ʁu	ʁua	ʁun	ʁun	ʁuan	ʁuai	ʁuai	ʁu	ʁu	ʁu
h	ho		hon			hun	hun	huan					

Table 4.2.(c): Santa syllable inventory (with reference to the Hui syllable inventory)

The results of this comparison are illustrated in the Figure 4.1.

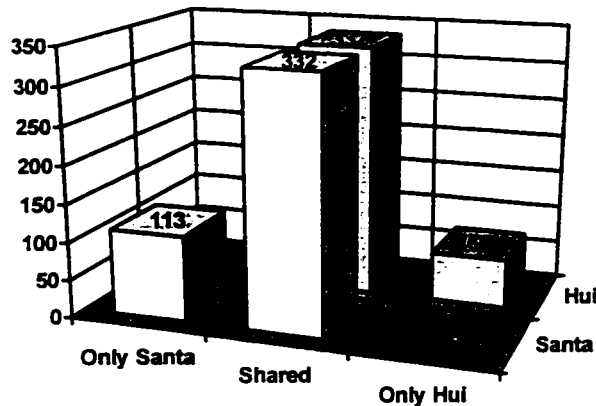


Figure 4.1: Common syllables in the Santa and Hui syllable inventories

The syllable inventories of Santa and Hui share 332 syllables. This accounts for 84% of the Hui syllable inventory. Only 65 of the 397 syllables in the Chinese syllable inventory or 16% are not shared by Santa without phonetic alteration.³⁹ Of these, 20 out of the 65 or 31% of those syllable types which are not shared contain front-rounded vowels or glides which are not found in the Santa phonemic inventory. 113 of the 445 syllables in the Santa syllable inventory or 25% are not shared by Hui. Most of these syllables contain segments that are not found in the Hui phonemic inventory, for instance those segments which are produced at the uvular place of articulation: /q/, /G/, and /ʁ/.

4.2.4.1 Phonetic alterations of borrowed syllable types

As mentioned above, there were 65 syllable types in Hui that were not directly borrowed into Santa without phonetic alteration. Of these, 29 or 45% of

³⁹ In this section, I have only counted those syllables that have an identical phonetic makeup in both Santa and Hui.

the Hui syllables have no correlation in Santa at all. Many of these syllable types, in fact, are rare in Mandarin. These are listed in (395).

(395) Hui syllables with no correlation in Santa

zau	pəu	sən	tsəŋ	nü	zuə
əi	fəu	kən	piə	nüə	dzuəi
dzəi	tsəu	wəŋ	miu	lüə	tʂuəi
gəi	dzən	ləŋ	dʒiun	jo	ruəi
kəi	tsən	dzəŋ	tʂiun	zə	

However, 36 of 65 or 55% of the syllable types were borrowed, but with phonetic alterations. These phonetic alterations are, for the most part, predictable. They are discussed below.

4.2.4.1.1 $ts \Rightarrow s$

The first type of phonetic alteration is where ts in Hui has become s in Santa. There are no words of Mongolic origin in Santa with ts, so syllables with ts are likely to be changed to s. This change affects six syllable types. Examples of these are given in (396) through (401). (See section 4.1.2.2.1 for more on the phoneme /ts^h/.)

(396) tsuan \Rightarrow suan
 suangan giə ‘to do jointing’
 (from Chinese cuàngān + Santa giə ‘to do’)

(397) tsuəi \Rightarrow suəi
 suəi ‘brittle, fragile’ (from Chinese cùi)
 suəiji ‘to hurry, to urge’
 (from Chinese cūi + Santa jī ‘BVS’)

(398) tsun \Rightarrow sun
 sunmin ‘bright, intelligent’
 (from Chinese cōngmíng)

- (399) tsu ⇒ su
su 'vinegar' (from Chinese cù)
- (400) tsau ⇒ sau
saujan 'prairie, grasslands'
(from Chinese cǎoyuán)
- (401) tsan ⇒ san
sanfəi 'broken, dilapidated' (from Chinese cánpò)

There is also another phonetic alteration to the syllable type tsan which retains the initial ts but the coda n becomes ŋ as in (402).

- (402) tscn \Rightarrow tsarj
 tsarjdʒiŋ giə 'to join the army'
 (from Chinese cānjūn + Santa giə 'to do')

In addition, there is another phonetic alteration to the syllable type tsə where the intial ts becomes tʃ and not s as in (403).

- (403) tsə ⇒ tɕə
dzəntɕə 'policy' (from Chinese zhèngcè) .

4.2.4.1.2 $\emptyset \Rightarrow n$

The next type of phonetic alteration is where n is inserted before a zero initial. This is discussed in section 3.2.5 above. This change affects two syllable types. Examples are given in (404) and (405).

- (404) au ⇒ nau
dziaunau 'pride' (from Chinese jiāo 'ào)
nauji 'to cook in water'
(from Chinese āo + Santa ji 'BVS')
- (405) əu ⇒ nəu
nəu 'lotus root' (from Chinese ǒu)

4.2.4.1.3 $n \Rightarrow l$

The next type of phonetic alteration is where n in Hui becomes l in Santa. This change affects two syllable types. Examples are given in (406) and (407).

- (406) nuŋ ⇒ luŋ
guluŋ ‘farm laborer’ (from Chinese gùnóng)
- (407) nuan ⇒ loŋ
loŋqodzi ‘hot pot’ (from Chinese nuǎnquōzi)

Example (407) above has an additional change where uan has become on. The n has become ɲ probably due to the influence of the following q.

4.2.4.1.4 High front rounded vowels and glides ⇒ unrounded

This, by far, is the most common change, affecting 17 syllable types in all. Santa has no front rounded vowels or glides. So when words containing these rounded segments are borrowed from Hui in Santa, the rounded vowels and glides become unrounded. There are a number of subtypes of this phonetic alteration. The first is where [ü] in Hui becomes [i] in Santa. This change affects nine syllable types. This is illustrated in examples (408) through (416).

- (408) jü ⇒ ji
dʒinji 'whale' (from Chinese jīngyú)
jidzəu 'universe' (from Chinese yǔzhòu)
- (409) lü ⇒ li
lidʒiən 'inn' (from Chinese lǚdiàn)
- (410) tɕü ⇒ tɕi
darasun tɕidzi 'drinking song'
(from Santa darasun 'wine' + Chinese qǔzi 'song')

- (411) dzü ⇒ dži
 ʂəudʒi ‘receipt’ (from Chinese shōujù)
 dʒidzi ‘tangerine’ (from Chinese júzǐ)
- (412) ɕü ⇒ ɕi
 ɕijau ‘needs’ (from Chinese xūyào)
 tɕiənɕi ‘modest’ (from Chinese qiānxǔ)
- (413) jün ⇒ jin
 jindəu ‘iron (for ironing)’
 (from Chinese yùndǒu)
 minjin ‘destiny, fate’
 (from Chinese mìngyùn)
- (414) tɕün ⇒ tɕin
 tɕindʒuŋ ‘the masses’
 (from Chinese qúnzhòng)
 wəitɕin ‘apron’ (from Chinese wéiqún)
- (415) dʒün ⇒ dʒin, dʒiŋ
 dʒiaŋdʒin ‘general (military)’
 (from Chinese jiāngjūn)
 tsəŋdʒiŋ giə ‘to join the army’
 (from Chinese cānjūn + Santa giə ‘to do’)
- (416) ɕün ⇒ ɕin, ɕiŋ
 ɕəŋɕin ‘first ten-day period of a month’
 (from Chinese shàngxún)
 dʒiaɕiŋ giə ‘to rebuke, to reprimand’
 (from Chinese jiàoxun + Santa giə ‘to do’)

In the last two examples above, (415) and (416), the coda n has become ŋ before g of giə ‘to do’.

There are also instances of lū becoming lu in Santa, rather than li. In these cases, the rounding is retained but the front vowel has become a back vowel. These are given in (417).

- (417) lü ⇒ lu
 ludəu 'mung (green) bean'
 (from Chinese lǔdòu)
 lutʂa 'green tea' (from Chinese lǔchá)

The next subtype of phonetic alternation affects six syllable types. In these, /ʉə/ which is phonetically [j̥e] becomes [j̥ɛ]. These are given in examples (418) through (423).

- (418) tɕüə ⇒ tɕiə
tɕiədzɪən
kuntɕiə
(from Chinese quēdiǎn)
‘peacock’ (from Chinese kǒngquè)
‘defect, weakness’

- (419) dzüə ⇒ dzia
dziaɗziŋ 'decision, resolution'
(from Chinese juéding)
dziaɗzia gia 'to resolve, to settle'
(from Chinese jiějué + Santa gia 'to do')

- (420) cūa ⇒ cīa
cīadzi
tuncīa
‘boots’ (from Chinese xuēzi)
‘classmate’ (from Chinese tóngxué)

- (421) tɕüən ⇒ tɕiən
tɕiənli 'authority, power'
(from Chinese quánlì)
wantɕiən 'complete, whole'
(from Chinese wánquán)

- (422) dʒüən ⇒ dʒiən
 dʒiəndʒi 'to wrap, to roll up, to bind'
 (from Chinese juǎn + Santa dʒi 'BVS')
- (423) ɕüən ⇒ ɕiən
 ɕiən 'ringworm' (from Chinese xuǎn)
 ɕiənwo 'whirlpool' (from Chinese xuǎnwō)

There is one more subtype of phonetic alteration that affects two syllable types where /qə/ which is phonetically [qɛ] becomes [iɛ]. These are given in (424) and (425).

- (424) jüə ⇒ /jə/ = [iɛ]
 ʃijə 'October' (from Chinese shíyuè)
 jinjə 'music' (from Chinese yīnyuè)
- (425) jüən ⇒ /jan/ = [iɛn]
 jandandʒiə 'New Year's Festival' (from Chinese yuándànjíé)
 fuwujan 'attendant' (from Chinese fúwùyuan)

4.2.4.1.5 Miscellaneous phonetic alterations

In this section, the remaining eight syllable types which are affected by phonetic alterations are discussed briefly.

In (426) the syllable coda ŋ of kan has become ŋ in Santa.

- (426) kan ⇒ kaŋ
 mənkaŋ 'threshold' (from Chinese ménkǎn)

In (427) əŋ of kəŋ has become iən in Santa.

- (427) kəŋ ⇒ kiən
 mokiən 'bathroom, toilet'
 (from Chinese máokēng)

In (428) əu of məu has become u in Santa.

- (428) məu ⇒ mu
 simula ~ sumula 'to think, to call to mind'
 (from Chinese sīmóu + Santa la 'BVS')

In (429) apparently tɕi of tɕia has become k in Santa. However, it seems more likely that k should be palatalized to tɕ under the influence of a front vowel. So, in this case, is /ka/ the older pronunciation? Support for this might come from the word otɕin 'daughter, girl' in Santa whose Script Mongolian cognate is ökin (Kuribayashi (1989:309)).

- (429) tɕia ⇒ ka
 kadzi 'outpost of the tax office' (from Chinese qiǎzi)

In (430) ai of sai has become ə in the first instance and in the second instance sai has become ɕiə in Santa.

- (430) sai ⇒ sə, ɕiə
 sə 'sieve, screen' (from Chinese shāi'ér)
ɕiə 'to dry in the sun, (for the sun) to shine upon'
 (from Chinese shài)

In (431) iun of ɕiun has become in in Santa.

- (431) ɕiun ⇒ ɕin
 gəuɕin 'bear' (from Chinese gǒuxióng)
 jinɕin 'hero' (from Chinese yīngxióng)

In (432) o of fo has become ə in Santa.

- (432) fo ⇒ fə
 fədziau 'Buddhism' (from Chinese fójiào)
 xofə 'Living Buddha' (from Chinese huófó)

In (433) tun has become dun in Santa.

(433) tun \Rightarrow dun
xundun ‘wonton, dumpling’ (from Chinese húntun)

4.2.4.2 Summary

If we take into account the 332 syllable types that have been borrowed directly into Santa with no phonetic alteration and the 36 syllable types that have been borrowed with some phonetic alteration, then altogether 368 or 93% of the 397 Hui syllable types have been borrowed into Santa in some form.

The results are striking, especially when one considers that Hui and Santa are members of completely different language families, Sino-Tibetan and Mongolic respectively. The fact that this is a result of language contact is not controversial, in my opinion. But what I find particularly noteworthy is the *extent* of the merger between the Santa and Hui syllable inventories.

In the next section, I will look at the Santa syllable types, and see to what extent these are common to words of both of Mongolic and Chinese origin.

4.2.5 The Santa syllable inventory

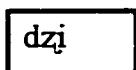
In this section, I will look solely at the Santa syllable inventory, without reference to the Hui syllable inventory. I will look at each of the 445 syllable types in Santa and determine whether each syllable type is present in only words of Mongolic origin,⁴⁰ in only words of Chinese origin,⁴¹ or whether each syllable type is present in both words of Mongolic and Chinese origin. The purpose of this analysis is to see the extent of the influence of Hui on the Santa syllable inventory. My working hypothesis is that a higher degree of influence will be represented by a higher number of syllable types that are present in both words of Mongolic and

⁴⁰ Actually, I am also including words of other origins here because they are almost certainly from an older strata than those words borrowed from Chinese. These include words borrowed from Arabic, Persian, and Turkic. These borrowings are relatively few.

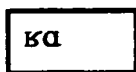
⁴¹ These include syllables that may have undergone phonetic alteration in Santa.

Chinese origin. The results of this analysis are presented in Table 4.3.(a) through (c). Example (434) is a key to these tables.

(434) Key to the Santa syllable inventory Table 4.3.(a), (b), and (c)



syllable in words of both Mongolic and Chinese origin



syllable only in words of Mongolic origin



syllable only in words of Chinese origin



syllable not present in Santa

The first square, with the syllable dzi, shows a syllable found in words of both Mongolic and Chinese origin (notice that this square is not shaded); the second square, with the syllable ka, shows a syllable found only in words of Mongolic origin (see footnote 40) (notice that this square is lightly shaded); the third square, with mai in it, shows a syllable found only in words of Chinese origin (see footnote 41) (notice that this square has light horizontal lines across it); the fourth square represents syllables not found Santa (notice that this square is darkly shaded).

	a	ai	au	an	anj	ə	ai	au	un	un	uj	ə
Ø	a	ai		an	anj	ə			un	un	uj	ə
j	ja		jau	jan	janj	ja		jau				
w	wa	wai		wan	wanj	wə	wai		wan			
b	ba	bai	bau	ban	banj	bə	bai		ban	banj		
p	pa	pai	pau	pan	panj	pə	pai		pan	panj		
m	ma	mai	mau	man	manj	mə	mai		man	manj		
f	fa			fau	fauj	fə	fai		fau	fauj		
d	da	dai	dau	dan	danj	də	dai	dau	dau	dauj		
t	ta	tai	tau	tan	tanj	tə	tai	tau	tan	tanj		
n	na	nai	nau	nan	nanj	nə	nai	nan	nan	nanj		
l	la	lai	lau	lan	lanj	lə	lai	lau				
r	ra		rau	ran	ranj	rə		rau	ran	ranj		
dz	dza	dzai	dzau	dzan	dzanj	dzə	dzai	dzan				
ts	tʃa	tʃai	tʃau	tʃan	tʃanj							
s	sa	sai	sau	san	sanj	sə	sai			sauj		
dʒ	dʒa	dʒai	dʒau	dʒan	dʒanj	dʒə		dʒau	dʒan	dʒanj		
tʃ	tʃa	tʃai	tʃau	tʃan	tʃanj	tʃə		tʃau	tʃan	tʃanj		
ʃ	ʃa		ʃau	ʃan	ʃanj	ʃə	ʃai	ʃau	ʃan	ʃanj		
ʒ				ʒan	ʒanj	ʒə			ʒau	ʒanj		
dʒ												
tʃ												
ɣ												
q	qa	qai	qau	qan	qanj	qə		qau	qan	qanj		
k	ka	kai	kau		kanj	kə		kau				
x	xa	xai	xau	xan	xanj	xə	xai	xau	xan	xanj		
ɕ	ɕa			ɕan	ɕanj	ɕə	ɕai			ɕanj		
q	qa	qai		qan	qanj		qai					
ɣ	ɣa			ɣan	ɣanj	ɣə	ɣai	ɣau	ɣan	ɣanj		
h	ha			han	hanj	hə	hai	hau	han	hanj	hə	

Table 4.3.(a) Santa syllable inventory (with reference to their sources)

	i	in	in	ia	ian	io	ian	iu	iau
Ø	i		in						
j	ji	jia	jia						
w	wi								
b	bi	bua	bua		bua	bua	bua	bua	bua
p	pi	pin	pin	pia	pin	pin	pin	pin	pin
m	mi	ma	ma	ma	ma	ma	ma	ma	ma
f									
d									
t									
n	ni	nin	nin	nua	nua	nua	nua	nua	nua
l	li	lia	lia	lia	lia	lia	lia	lia	lia
r	ri								
dz	dzi								
ts	tsi								
s	si								
dz	dzj								
tʃ	tʃi								
ʃ	ʃi								
z	zi								
dz	dzin	dzin	dzin	dzia	dzia	dzia	dzia	dzia	dzia
tʃ	tʃin	tʃin	tʃin	tʃia	tʃia	tʃia	tʃia	tʃia	tʃia
ʃ	ʃin	ʃin	ʃin	ʃia	ʃia	ʃia	ʃia	ʃia	ʃia
g	gi								
k	ki								
x									
ɣ	ɣi								
q									
ʁ	ʁi								
h									

Table 4.3.(b): Santa syllable inventory (with reference to their sources)

	o	on	onj	u	ua	un	unj	uan	uanj	uai	uai	w	un	unj
Ø	o		onj	u		un								
j				ju			juj	juan						
w	wo			wu										
b	bo			bu		bun								
p	po			pu								pu		
m	mo		moj	mu			muuj							
f				fu		fun	fuj							
d	do		doj	du		dun	duj	duan						
t	to		toj	tu			tuj	tuan				tu		
n	no	non		nu										
l	lo	lon	loj	lu		lun	luj	luan						
r	ro		roj	ru	rua	run	ruj	ruan						
dz	dzo			dzu		dzun	dzuuj	dzuau						
ts	tso			tsu		tsun								
s	so		soj	su		sun	suj	suan			sui			
dʒ	dʒo			dʒu		dʒun	dʒuj	dʒuan						
tʃ	tʃo			tʃu	tʃua	tʃun	tʃuj	tʃuan	tʃuanj					
ʃ	ʃo			ʃu	ʃuo	ʃun	ʃuj	ʃuan	ʃuanj					
z				zu		zun	zuj	zuan	zuanj					
dʒ														
tʃ														
ʃ														
q	qo	qon	qonj	qu	qua	qun	quj	quan	quanj					
k	ko			ku		kun	kuj	kuan	kuanj	kuai		ku		
x	xo		xonj	xu	xua	xun	xuj	xuan	xuanj	xuai				
ci	co		conj	cu	cua		cuj					cu		cunj
q	qo			qu						quai		qu		
ʁ	ʁo		ʁonj	ʁu	ʁua	ʁun	ʁuj			ʁuai		ʁu	ʁum	
h	ho		honj			hun	huj							

Table 4.3.(c): Santa syllable inventory (with reference to their sources)

The results of this analysis are illustrated in Figure 4.1.

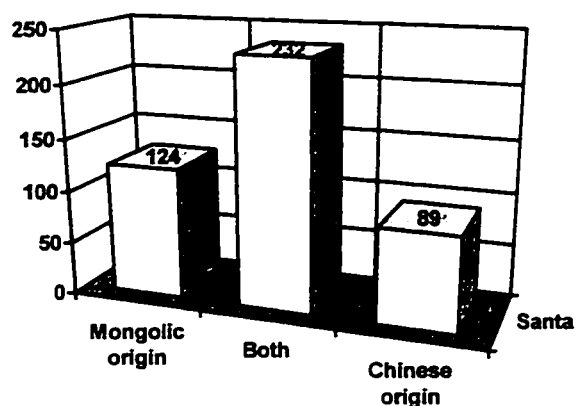


Figure 4.2: Common syllable types in words of both Mongolic and Chinese origin

Figure 4.2 above shows that 232 syllable types were found in words of both Mongolic and Chinese origins. This represents 58% of the overall Hui syllable inventory of 397 syllables, but more importantly, it represents 72% of the 321 Hui syllable types that occur in Santa. 89 syllable types were found in only words of Chinese origin. 124 syllable types were found in only words of Mongolic origin. These results seem to support my hypothesis that a higher degree of influence from Hui will be represented by a higher number of syllable types that are present in both words of Mongolic and Chinese origin. In other words, 232 syllable types out of 321 of Hui origin, or 72%, occur in words of both Mongolic and Chinese origin. That means that these syllable types are not confined to Chinese loanwords, but are actually permeating the Santa syllable inventory as a whole.

4.2.5.1 Discrepancies between Figure 4.1 and Figure 4.2

In some ways, the results for Table 4.2.(a) through (c) given in Figure 4.1 don't tally with the results for Table 4.3.(a) through (c) given in Figure 4.2. For

instance, Figure 4.1 states that there are 113 syllable types that are only found in Santa while Figure 4.2 states that there are 124 syllable types found in words of Mongolic origin. It would be expected that these totals would be equal. So why is there a difference of 11 syllable types? In addition, Figure 4.1 states that there are 332 syllable types that are shared by Santa and Hui. It would be expected then, in Figure 4.2 that the 232 syllable types that are found in both words of Mongolic and Chinese origin and the 89 syllable types only found in words of Chinese origin would add up to 332, but they add up to only 321. So why do these discrepancies exist?

In Table 4.2.(a) through (c), a syllable was considered to be shared with Hui when it was identified in the Santa lexicon, regardless of the origin of the word in question. Therefore, it is possible that there were some syllable types that were identified as being shared with Hui that in fact were not present in words of Chinese origin. This situation did in fact occur. There are 23 syllable types that are shared with Hui in Santa that only occur in words of Mongolic origin. These are listed in (435).

(435) Shared syllables that only occur in words of Mongolic origin

dzo	pin	dzai	nə	ən
tso	nin	aŋ	dzə	əŋ
tʃua	lia	paŋ	sə	səŋ
lun	ai	saŋ	dəi	
zun	lai	ə	ʃəi	

In addition, there are a number of syllable types that only occur in words of Chinese origin or that occur in both words of Chinese and Mongolic origin that are not recognized Hui syllable types. In all of these cases, there has been a phonetic alteration in Santa resulting in a syllable type not found in Hui. There are 12 syllable types that fit into this category, and they are given in the examples below. Also see section 4.2.4.1 above for more on phonetic alterations of borrowed syllable types.

4.2.5.2 Non-Chinese syllable types found in words of Chinese origin

In the examples below, syllable types found in words of Chinese origin have undergone phonetic alteration so that the syllable type in question is no longer one found in the Hui syllable inventory. These cases are isolated yet exhaustive.

In (436), jüən has become [j_ɥən] in Santa. This example is very unusual. There are no other examples in the Santa lexicon where two glides are adjacent in the syllable onset. Moreover, in my consultants pronunciation, it approaches [j_ɥ.ən], so that a syllable boundary has been inserted creating a two syllable word.

- (436) /juan/ = [j_ɥən] ← jüən
sara juanda ‘for the moon to become full, to wax (of the moon)’
(from Santa ‘moon’ + Chinese yuán + Santa -da ‘VS’)

In (437) jü has become ju in Santa. Similar to (436) above, ü has lost its front vowel quality but retained its rounding.

- (437) ju ← jü
janju ~ jajju ‘potato’ (from Chinese yángyù)

In both (438) and (439) /ə/ has become /u/ in Santa, possibly from the influence of the preceding labials.

- (438) muɳ ← məɳ
muɳgu ‘Mongol (Mongolian) nationality’
(from Chinese měnggǔ)

- (439) fuɳ ← fəɳ
fuɳsu ‘custom, habit’ (from Chinese fēngsù)

In (440) əi has become uəi in Santa.

- (440) luəi ← ləi
zəɳluəi ‘mankind, humanity’ (from Chinese rénlèi)

In the examples below, syllable types found in words of Chinese origin (but are also found in words of Mongolic origin) have undergone phonetic alteration so that the syllable type in question is no longer one found in the Hui syllable inventory. Examples (441) through (447) represent isolated yet exhaustive cases. They are not productive.

(441) bə ⇐ bo, bai
 bəlidzi 'mirror' (from Chinese bōlǐng)
 minbəre 'to understand, to comprehend'
 (from Chinese míngbái + Santa -rə 'BVS')

(443) wə ← wo
bawə 'hold, grasp' (from Chinese bǎwò)

(444) t̤əi ⇐ t̤ə
t̤əid̤ziən ‘distinguishing feature,
characteristic’
(from Chinese tèdiǎn)

(445) *nia* \leftarrow *ja*
niadzi 'sprout, bud' (from Chinese *yázi*)

In (446) kəŋ has become kiən in Santa.

(446) kiən ← kəŋ
 mokiən ‘bathroom, toilet’ (from Chinese máokēng)

In (447) gə has become giə in Santa. This change is productive in that there many examples of gə becoming giə in Santa. Only a few are given below.

(447) giə ← gə
 giəbi ‘neighbor’ (from Chinese gébì)
 giəmin ‘revolution’ (from Chinese qémìng)
 tɕiʃigiə ‘seventy pieces’ (from Chinese
qīshíge)

4.2.5.4 Summary

If we were to exclude these examples from our previous totals in Figure 4.2 above, the results are percentage-wise, almost identical. There are 225 syllable types that occur in words of both Mongolic and Chinese origin and 84 syllable types that occur in only words of Chinese origin. Therefore 73% of the borrowed syllable types from Hui occur in words of Mongolic origin as well.

In the next section, we will look at comparative and historical Mongolic evidence and show some of the historical changes that occurred in Santa.

4.2.6 Comparative and historical Mongolic evidence

The fact that the present situation arose through contact-induced language change, in my opinion, is uncontroversial. Some of the socio-historical factors that contribute to language contact between the Santa and the Hui are discussed in section 2.3.2 above.

In this section, I want to look at comparative Mongolic evidence and show the likely *avenues of change* that Santa took from the Mongolic syllable structure type to the Mandarin Chinese syllable type.

Table 4.4 is a summary of the consonants that may appear in the syllable coda in Mongolic, discussed earlier in examples (381) through (385) above.

Mongolian	b	d	g			t		s		ʃ	x	dʒ	tʃ	m	n	ŋ	l	r
Dagur	b	d	g		p	t	k	s		ʃ		dʒ	tʃ	m	n		l	r
E. Yugur	b	d	g	ɣ				s		ʃ				m	n	ŋ	l	r
Monguor	b	d	g	ɣ				s	ɕ	ʃ				m	n	ŋ	l	r
Baonan	b	d	g	ɣ				s	ɕ		χ		tɕ	m	n	ŋ	l	r

Table 4.4: Summary of consonants that appear in the syllable coda in Mongolic⁴²

Of these, b, d, g, s, m, n, l, and r are common to Mongolic. In addition, ɣ and ŋ occur in 4 out of the 5 languages surveyed here. These are listed in (448).

(448) b, d, g, s, (ɣ), m, n, (ŋ), l, r

It is these consonants that I will concentrate on now. But first, because I want to emphasize the developments and changes in the syllable coda that brought Santa to its present state, I will eliminate n and ŋ from the following discussion because they are still allowed in the Santa syllable coda. That leaves us with eight consonants: b, d, g, s, ɣ, m, l, and r.

In the comparative examples that follow, I will be including Script Mongolian (abbreviated as Script M. in the examples). This written language, still used in Inner Mongolia today⁴³ dates back to the late 12th or early 13th century (Poppe 1965:15). Modern languages that employ this script have not modified it. Therefore Script Mongolian retains many archaic qualities and is a good indicator of what Middle Mongolian might have been like.

⁴² This table does not include glides.

⁴³ I have heard that Script Mongolian is being reintroduced in Outer Mongolia to replace Cyrillic.

Example (449) gives some comparative data from Mongolic for b.⁴⁴

(449)		$b \Rightarrow \emptyset$			$b \Rightarrow \eta$
	GLOSS	(a) 'leaf'	(b) 'button'	(c) 'to lie down'	(d) 'salt'
	Script M.	nabči(n)	tobči	kebte-	dabusu(n)
	Mongolian	nəbtʃ	dɔbtʃ	gəbtən	dabs
	Dagur	lartʃ	twartʃ	kərt-	--
	E. Yugur	ʃabdʒəŋ	tɔbtʃə	--	daabsən
	Monguor	labdʒə	teɕdʒə	kədee-	dabsə
	Baonan	labtɕyŋ	tabtɕiə	--	dabsuŋ
	Santa	latʃəŋ	tədʒi	kidʒiə-	dəŋsuŋ

In Santa, the consonant b has been deleted in (449)(a) through (449)(c), and in (449)(d) the b has changed to ŋ. Both of these changes allow these words to conform to Santa syllable structure.

I have only been able to find one clear example of what might have happened to d in Santa when it was in the syllable coda, illustrated in (450).

(450)		$d \Rightarrow tɕi$
	GLOSS	'thick'
	Script M.	hödken
	Mongolian	otgõ
	Dagur	urkun
	E. Yugur	hədgøn
	Monguor	ʃdogoon
	Baonan	dəgəŋ
	Santa	otɕiɕəŋ

One can see in Santa that an i has been inserted at some point so that this word conforms to Santa syllable structure. At what time the consonant d (/t/) lost

⁴⁴ Data for these comparative examples is drawn for the most part from Kuribayashi (1989).

its aspiration is unclear but it was subsequently palatalized. See section 3.2.4 for more on palatalization in Santa.

Examples (451)(a) through (451)(d) illustrate how g, ɣ, or ɕ was deleted in syllable coda position in Santa.

(451)		$g \Rightarrow \emptyset$			
	GLOSS	(a) 'time'	(b) 'cane'	(c) 'spring (of water)'	(d) 'knee'
	Script M.	čay	tayay	bulay	ebüdüg
	Mongolian	tʃag	tajǯig	bulǯag	obdöḡ
	Dagur	--	tajig	bulaar	--
	E. Yugur	tʃæg	tiag	bulag	wədæg
	Monguor	tɕag	tiag	bulag	vudæg
	Baonan	--	--	bulag, balag	ebdæg
	Santa	tʃa	təija	bula	odəu

Example (452) shows that an s was deleted after g which later became ɣ, allowing it to become the onset of the next syllable, thus not violating Santa syllable structure.

(452)		$g \Rightarrow \gamma$
	GLOSS	'buttock'
	Script M.	bögse(n)
	Mongolian	boxs
	Dagur	burs
	E. Yugur	--
	Monguor	--
	Baonan	boɣor
	Santa	boɣo

Examples (453)(a) and (453)(b) show how i has been inserted after s making s the onset of the next syllable and in (453)(c) it shows the same thing except that s has been palatalized to ʃ.

Notice the Eastern Yugur word for ‘tiger’ in (453)(b), is bərəs. Since Eastern Yugur allows /s/ in the coda, but not consonant clusters, an ə has been inserted between r and s so that it conforms to Yugur syllable structure.

(453)		s ⇒ si		s ⇒ ši
	GLOSS	(a) ‘to wear’	(b) ‘tiger’	(c) ‘to twist, to wring’
	Script M.	emüs-	bars	muski-
	Mongolian	omsõn	bar	muʃgǎn
	Dagur	əms-	--	morki-
	E. Yugur	məs-	barəs	--
	Monguor	musə-	bas	muʃgə-
	Baonan	musi-	bas	miçigə-
	Santa	misi-	'basi	muʃiki-

In regards to ʃ in the coda, one can refer to (453)(c) above where ʃ has been derived from ʃ in Script Mongolian. This is the only comparative example I have with ʃ in the coda.

In example (454) we see that what happened to m when it occurred in the coda is much more complicated. The most common type of change, by far is illustrated in (454)(a) and (454)(b) where m has become n or ŋ respectively. But one can also find instances where m has been deleted as in (454)(c) and where u has been inserted so m is the onset of the following syllable as in (454)(d).

(454)		m ⇒ n	m ⇒ ŋ	m ⇒ Ø	m ⇒ mu
	GLOSS	(a) 'disease'	(b) 'comb'	(c) 'step'	(d) 'to taste'
	Script M.	gem	sam	alqum	amsa-
	Mongolian	gəm	sannə, sand	alxām	amšan
	Dagur	gəm	sam	alkud	ant-
	E. Yugur	gem	sam	solwəm, arəm	amsa-
	Monguor	--	sam	xalgu	amsa-
	Baonan	gəm	sam	χalguŋ	--
	Santa	giən	səŋ	haŋku	amusa-

Example (455) is interesting because the pronunciation umba does occur and seems to be in free variation with unba in Santa. If one were to analyze this synchronically, one would say that [m] is merely an allophone of /n/ which occurs before b (/p/) and therefore it does not conflict the the Santa syllable structure constraints. But looking at it diachronically, one sees that unba must be the *more recent* of the two pronunciations. So the pronunciation umba may well be on its way out and has thus been retained from an earlier stage. See sections 4.1.2.1.5 for more on the phoneme /p/, 4.1.2.5.1 for more on the phoneme /m/, and 3.2.6 for more on the homorganic nasal-stop constraint.

(455)		mb ⇒ mb
	GLOSS	'to swim'
	Script M.	umba-
	Mongolian	umbăn
	Dagur	χompaa-
	E. Yugur	umba-
	Monguor	xumba-
	Baonan	mba-
	Santa	unba-, umba-

In example (456)(a) ɭ has become ɳ and in (456)(b) and (456)(c) ɭ has become ŋ in syllable coda position.

(456)		ɭ ⇒ n	ɭ ⇒ ŋ	
	GLOSS	(a) 'foot, leg'	(b) 'fire'	(c) 'to step'
	Script M.	köl	yal	halqu-
	Mongolian	xol	gal	alxǎn
	Dagur	kulj	galj	alku-
	E. Yugur	kəl	gal	algə-
	Monguor	kol	gal	xalgu-
	Baonan	kual	χal	xalgə-
	Santa	kuən	qɑŋ	hɑŋku-

In examples (457)(a) and (457)(b) ɭ has been deleted in the syllable coda position.

(457)		ɭ ⇒ Ø	
	GLOSS	(a) 'pillar'	(b) 'dry dung of animals'
	Script M.	tulyayuri	aryal
	Mongolian	tulguur	--
	Dagur	twaaləg	harkal
	E. Yugur	tulga	xargal
	Monguor	tulga	
	Baonan	tolga	--
	Santa	tuxua, tuxua	hɑŋga

In examples (458)(a) through (458)(c) ɾ has been deleted in syllable coda position.

(458)		$r \Rightarrow \emptyset$		
	GLOSS	(a) 'hand, arm'	(b) 'yurt, house'	(c) 'to deliver'
	Script M.	yar	ger	kürge-
	Mongolian	gar	gər	xurgǎn
	Dagur	garj	gərj	kurgəə-
	E. Yugur	gar	ger	kørgø-
	Monguor	gar	ger	kurgee-
	Baonan	χar	gər	kurgə-
	Santa	qa	giə	quko-

In (459)(a) \underline{r} has become \underline{n} and in (457)(b) above \underline{r} has become $\underline{\eta}$. In (459)(b) \underline{u} has been inserted so that \underline{r} is the onset of the following syllable.

(459)		$r \Rightarrow n$	$r \Rightarrow ru$
	GLOSS	(a) 'wife of an elder brother'	(b) 'day before yesterday'
	Script M.	bergen	urjidur
	Mongolian	bərgǎ	urdʒdär
	Dagur	bərgen	--
	E. Yugur	biirge	urdʒyður
	Monguor	bergen	rdʒudur
	Baonan	urgan	ndʒiudər
	Santa	bankən	urudʒudu

I mentioned early on that \underline{r} occasionally occurs in the syllable coda. Example (460) lists a number of these words in Santa where this occurs.

(460) Instances of r in the coda

a) gurgɑ ~ guriga	‘Adam’s apple’
b) biəmar ~ biə'mari	‘illness’
c) guar ~ gua	‘two’
d) marta ~ mata	‘to forget’
e) giər ədzən	‘head of household’
f) maɣar maɣar	‘used to call sheep’
g) dər dər	‘used to call horses’
h) dzir dzir	‘sound of a brook’

Both (460)(a) and (460)(b) have an alternate pronunciation. My consultant considers both (460)(a) and (460)(b) to be 3 syllable words which do not have r in the coda. (460)(b) is in fact a Persian borrowing. Both (460)(c) and (460)(d) have common alternate pronunciations. Evidence for the presence of an r in the coda in Middle Mongolian can be found by looking at Script Mongolian, as in (458) and (459) above. Thus it seems that these instances are, in fact, doublets and the more recent pronunciation is the r-less one. (460)(e) is an interesting example since giər ‘house’ has retained its original r (see(458)(b) above with giə ‘house’), but this phrase seems to be lexicalized, and in addition, the following word ədzən ‘host’ begins with a vowel, thus allowing the r to be the onset of the following syllable in fast speech. (460)(f) and (460)(g) are both sounds used to call animals and (460)(h) is onomatopoeic. Syllables found in these latter types of lexical items are known to be more peripheral in nature.

It appears that r is one of the final syllable coda consonants given in (448) above to go through the change from the Mongolic type to the Chinese type of syllable structure. The recent nature of this change is evidenced by the presence of doublets in Santa with r and r-less pronunciations. It is also known that in many Mandarin dialects, suffixation of a retroflex [ɭ] is common. This may be a significant factor in delaying the loss of syllable coda r in Santa. For more on the phoneme r, see section 4.1.2.5.4.

In summary, it is very clear that Santa originally had a syllable structure similar to that of other Mongolic languages. But due to language contact, those

consonants originally allowed in the coda position have gone through specific changes. One of the most common changes was the loss of the consonant altogether. We also saw, that among the sonorants m, l, and r, they were just as likely to change to n or ŋ as they were to be lost. Another common phenomena was the insertion of a vowel, either i or u, after the consonant so that the consonant in question could be syllabified as the onset of its own syllable. The result of all these changes is that Santa and Hui syllable structure are today almost identical.

4.2.7 Conclusions

I have shown that Santa syllable structure is quite different from the syllable structure of the other Mongolic languages spoken in China.⁴⁵ I have also shown that the Santa syllable template and the Hui syllable template are in fact identical. This situation arose through contact-induced language change. From there, I went on to show that the Santa and Hui syllable inventories overlap to a large degree. Santa and Hui share 332 syllable types. That translates into 75% of the Santa syllable inventory and 84% of the Hui syllable inventory are shared. I have also shown that 72% of the Hui syllable types found in Santa are found in words of both Mongolic and Chinese origin. This demonstrates that the Hui syllable types have been largely incorporated into Santa linguistic structure as a whole and are not isolated cases only found in words of Chinese origin. Finally, I have shown by using comparative Mongolic examples how Santa changed over time from a language with the Mongolic syllable type to a language with a Chinese syllable type.

⁴⁵ An exception to this is Minhe Monguor which also has a non-Mongolic syllable structure that is similar to Chinese (Keith Slater, personal communication).

4.3 Stress

Stress in words of Mongolic origin is ultimate in Santa. In other words, stress always falls on the last syllable of any given word. Some mono-morphomic words are given in (461).

(461)	ja'wu	'to walk'
	a'kəŋ	'village'
	funiə'kəŋ	'fox'
	hama'ra	'to rest'
	mausumə'kə'tʃi	'witch'

When a suffix is added, the stress normally shifts to the last syllable of the word. Some examples of this are given below. A hyphen '-' precedes the suffix when the stress shifts to the last syllable of the word. This is the default situation.

(462)	kun-'la	'people' (<u>kun</u> 'person' + - <u>la</u> 'PL')
	əkəŋ-'də	'at the village' (<u>əkəŋ</u> 'village' + - <u>də</u> 'LC')
	jawu-'daŋ	'walking style' (<u>jawu</u> 'to walk' + - <u>daŋ</u> 'style')
	funiəkəŋ-'ni	'fox's' (<u>funiəkəŋ</u> 'fox' + - <u>ni</u> 'GN')
	hamara-'wo	'rested' (<u>hamara</u> 'to rest' + - <u>wo</u> 'PRF')

However, there is a small set of markers that do not cause the stress to shift when they are added. These are preceded by the symbol '='. Some examples are given below.⁴⁶

⁴⁶ Items preceded by '=' are almost always clitics. However, there are a number of clitics that are not preceded by '='; for instance, all the case markers are clitics since they attach to NPs, not just to nouns.

- (463) ja'wu=nə 'will walk' (jawu 'to walk' + =nə 'IMP')
to'mo=Gala 'use a hammer' (tomo 'hammer' + =Gala 'INST')
hama'ra=dənə 'after one rested' (hama 'to rest' + =dənə 'DQ')
biə'ri=ni 'his wife' (biəri 'wife' + =ni 'GN')⁴⁷
ətɕiə-'də=ni 'in the past' (ətɕiə 'early' + -də 'LC' + =ni 'TM')

In addition to these, there are two disyllabic suffixes which only cause the stress to shift to the first syllable of the disyllabic suffix when they are added. The symbol '+' precedes these suffixes.

- (464) jawu+'dziwo 'walking' (jawu 'to walk' + +dziwo 'PROG')
irə+'sənu 'as soon as one comes' (irə 'come' + +sənu 'DM')

There are only a couple of words of Mongolic origin which are exceptions to the Santa ultimate stress pattern.

- | | | | |
|-------|-------|---------|--|
| (465) | 'basi | 'tiger' | /pasi/ → ['paɕɪ] |
| | 'bosi | 'cloth' | /p ^w osi/ → ['p ^w oɕɪ] |

Both of these words contain final voiceless vowels phonetically. The first instance 'basi 'tiger' is probably originally a Persian word, but it has long history in Mongolic. This can be seen in (466).

⁴⁷ The genitive marker =ni does not cause the stress to shift when it is suffixed to the possessed NP in which case it indicates third person possession.

(466) (Kuribayashi 1989: 190)

	'tiger'
Script M.	bars
Mongolian	bar
Dagur	--
E. Yugur	barəs
Monguor	bas
Baonan	bas
Santa	'basi

This example illustrates that the origin of the final *i* is due to epenthesis. It has been inserted so that *'basi* 'tiger' conforms to Santa syllable structure. The stress did not shift after this vowel was inserted and the word was resyllabified.

Unfortunately, I do not have any comparative evidence for the next instance *'bosi* 'cloth', which is similar phonetically to the previous example. Interestingly enough, there is a verb *bosi* [p^wo'si] 'to get up, to wake up' that follows the normal stress pattern and has ultimate stress. That means in this sole instance that stress is phonemic, but in words of Mongolic origin this is an isolated and exceptional case.

There are a number of words of unknown origin that do not follow the ultimate stress pattern. Some of these are given in (467).

(467)	'toŋgori	'wild goose'
	'dawala	'(urinary) bladder; blister'
	'bawa	'great-grandfather'

There are also words of Arabic origin that do not follow the ultimate stress pattern.

(468)	'aɣili	'wisdom, ability'
	'məhəri	'dowry, betrothal gifts'
	ɣa'ləbu	'body, stature, figure'
	'saxari	'breakfast fast'

In words of Chinese origin the stress pattern is not predictable. For instance (469) is a minimal pair. However, examples like this are not common in Santa.

(469)	'sidzi	'persimmon' (from Chinese <u>shìzi</u>)
	ʂidzi	'lion' (from Chinese <u>shīzi</u>)

Some more examples of words of Chinese origin that do not follow the ultimate stress pattern are given in (470). Examples like this are quite common.

(470)	'dauzi	'rice, paddy' (from Chinese <u>dàozi</u>)
	'tusu	'custom, habit' (from Chinese <u>tǔsú</u>)
	'xuʂi	'nurse' (from Chinese <u>hùshi</u>)
	'dadəu	'broad bean' (from Chinese <u>dàdòu</u>)
	'xuaməi	'a kind of thrush' (from Chinese <u>huàméi</u>)

The stress pattern in Santa of Chinese loans has been most likely influenced by the original tones of these words. At this point, I am not willing to draw an conclusions. It should be noted that the Hui tones are not identical to the Mandarin Chinese tones given in (470) above. For a study on the influence of Hui tones on Baonan stress patterns, see Li (1986).

In summary, stress on words of Mongolic origin is predictable. Stress is ultimate and shifts to the last syllable when a suffix is added. Suffixes that do not cause the stress to shift are a small subset and are preceded by '='. There are two disyllabic suffixes in which the stress shifts to the first syllable of the disyllabic suffix. These are preceded by '+'. Words that are not of Mongolic origin do not necessarily follow the ultimate stress pattern. Those that do not have ultimate stress are marked for stress in the orthophonemic and phonemic transcriptions. Finally, as the examples in this section show, syllable weight has no affect on the Santa ultimate stress pattern.

4.4 Lack of productive vowel harmony in Santa

Poppe (1965:181) claims that vowel harmony is common to all Altaic languages of which the front/back type is more ancient but the rounded/unrounded type is more recent. The Turkic and Mongolic languages families both have a long history of productive vowel harmony.

Although a large number of the indigenous words in the Santa lexicon have either only front or back vowels, this is only a remnant of a once productive vowel harmony system that is no longer productive. The best evidence of this is to compare inflected Santa and Khalkha Mongolian nouns. In Khalkha, which retains productive vowel harmony, suffixes must agree in frontness or backness with the root (non-initial vowel /i/ is neutral). But in Santa, the form of the suffix is unchanged. Example (471) illustrates this by the addition of the ablative case suffix to roots with different vowels.

(471)	<u>Santa</u>	<u>Khalkha</u>	<u>Gloss</u>
	mori-sə	morin-oos	‘from the horse’
	qa-sə	gar-aas	‘from the hand’
	giə-sə	gert-ees	‘from home’

Some remnants of productive vowel harmony can be found in some isolated examples given in (472). These alternations are not productive.

(472)	xula-ra	‘to become red’ (<u>xulaŋ</u> ‘red’ + <u>-ra</u> ‘VAS’)
	noŋo-ro	‘to become green’ (<u>noŋoŋ</u> ‘green’ + <u>-ro</u> ‘VAS’)
	kugia-rə	‘to become blue’ (<u>kugia</u> ‘blue’ + <u>-rə</u> ‘VAS’) ⁴⁸
(473)	dzolia-tu	‘to become soft’ (<u>dzoliaŋ</u> ‘soft’ + <u>-tu</u> ‘VAS’)
	tʂoŋo-to	‘to decrease’ (<u>tʂoŋoŋ</u> ‘few, less’ + <u>-to</u> ‘VAS’)

⁴⁸ It’s not clear that these are all from the same source. The suffix -rə may be a result of the grammaticization of the verb irə ‘to come’. It is found more frequently than -ra and -ro which only have isolated examples.

- (474) *giən udzə-ɤə* *lit.* 'to cause sickness to be seen'
 (*giən* 'illness', *udzə* 'to see' + *-ɤə* 'CS')
- kuəitɕiə-ɤə* 'to become cold (of weather)'
 (*kuəitɕiən* 'cold' + *-ɤə* 'CS')

In (472) above *-rɑ*, *-rɔ*, and *-rə* immediately follow vowels of identical quality in the stem. There are other suffixes that derive verbs from color terms as well. See section 5.2.4 in Chapter 5 for more on this.

In (473) above the suffix *-to* follows a stem with *o*. The suffix *-tu* is productive while this is the only instance of *-to*. For more on *-tu* see section 5.2.4.1.

In (474) above the causative suffix *-kɑ* has an alternate *-ɤə* which follows the vowel *ə* in both cases. The use of *-ɤə* is not productive. In fact, *giən udzəɤə* 'to see a doctor' can be found in texts as *giən udzəɤɑ*. For more on the causative suffix see section 5.3.2.1.2.1 in Chapter 5.

4.5 Lack of long vowels in Santa

Poppe (1965:177-8) claims that the long vs. short vowel distinction occurs in all Altaic languages. However, Santa has lost its long/short vowel distinction. According to Poppe, there are two types of long vowels – primary and secondary. In Mongolic and Turkic, primary long vowels were preserved from the oldest sources and cannot be reconstructed any further while secondary long vowels were derived from VC or VCV sequences.

According to Poppe (1965:178-9) the primary long vowels are only preserved in Dagur and Monguor. A pair of examples are given in (475).

(475) (Kuribayashi 1989:350, 286)

	‘five’	‘tree’
Script M.	tabu(n)	modu(n)
Mongolian	tab	mōdī
Dagur	taaw	mood
E. Yugur	taawən	muudən
Monguor	taavun	(ɕdzoosə)
Baonan	tawuŋ	(ɕiu)
Santa	tawuŋ	mutuŋ

From (475) above we see that Eastern Yugur preserves the primary long vowels as well. At the time of Poppe (1965), he probably did not have access to the Eastern Yugur data. However, as the examples show, the primary long vowels have been lost in Santa, Baonan, and Mongolian.

Some comparative examples of secondary long vowels in Mongolic are given in (476).

(476) (Kuribayashi 1989: 282, 176, 296, 246, 316)

	‘bad, evil’	‘mountain’	‘face’	‘red’	‘to close’
Script M.	mayu	aɣula(n)	niɣur	hulayan	qaya
Mongolian	muu	uul	nuur	ulaā	xaan
Dagur	moo	aul	(nedəm)	xulaan	χaa
E. Yugur	muu	uula	nyyr	ɬaan	χaa
Monguor	mauu	ula	niuur	fulaan	xaa
Baonan	muŋ	(hi)	nur	fulaŋ	χa
Santa	mau	ula	nu	xulaŋ	qa

These examples show that Santa and Baonan have lost their secondary vowel length distinctions. Mongolian, Dagur, Eastern Yugur, and Monguor all retain secondary vowel length distinctions to varying degrees. As can be seen from Script Mongolian which preserves Middle Mongolian pronunciations, these

secondary vowel length distinctions developed from ‘VyV’ sequences where the y was eventually lost.

4.6 The retroflex series of consonants

Santa Mongolian phonemic inventory includes the following retroflex obstruents: /tʂʰ/, /tʂ/, /ʂ/, and /ʐ/ (orthophonemically these are tʂ, dʐ, ʂ, and ʐ). When the phoneme /i/ occurs after these consonants, the retroflex apical vowel [ɪ] is found. This state of affairs is identical to what is found in Linxia Hui and Mandarin Chinese.

However, the retroflex series of consonants is not only found in words of Chinese origin. The following comparative Mongolic examples show several words of Mongolic origin and their Script Mongolian equivalents.

(477) (Kuribayashi 1989: 322, 340, 278, 204

	‘scissors’	‘neck’	‘new’	‘flower’
Script M.	qayiči(n)	kūjügüü	sine	čečeg
Santa	qaitʂi	gudʐəŋ	ʂini	tʂidʐə

These examples are fairly representative of the sources of retroflex consonants in words of Mongolic origin: tʂ of qaitʂi ‘scissors’ corresponds to č in Script Mongolian (which preserves Middle Mongolian pronunciations); dʐ of gudʐəŋ ‘neck’ corresponds to ʒ; and ʂi in ʂini ‘new’ corresponds to si (the s has been palatalized before i). In tʂidʐə ‘flower’, dʐ corresponds to č. Perhaps it was first tʂ (/tʂʰ/) and then lost its aspiration between vowels. The phoneme /ʐ/ is not found in words of Mongolic origin in Santa but only in words of Chinese origin.

Santa also has an alveolo-palatal series of obstruents as well: tɕʰ/, /tɕ/, and /ɕ/ (orthophonemically tɕ, dɕ, and ɕ). But almost all the occurrences of tɕ and dɕ in words of Mongolic origin are due to palatalization of t and d before a front vowel. Historically, they do not generally correspond with č, ʒ, and si of Script

Mongolian.⁴⁹ Thus, all the occurrences of the retroflex series of consonants in words of Mongolic origin in Santa have developed from non-retroflex consonants in Middle Mongolian.

The situation in the other Mongolic languages of the Gansu/Qinghai border region is much different. Dagur (Enhebatu 1988) and Khalkha Mongolian (Poppe 1970:29-39) do not have a retroflex series of obstruents, but Baonan (Chen 1985, Chen 1987), Monguor (Hasibate'er 1985, Qingge'ertai 1991), and Eastern Yugur (Bao 1984, Bao & Jia 1991) all do. This is where the similarity between these languages and Santa ends though: in Baonan (Tongren dialect), ts and dz are mainly found in words of Tibetan origin (Baonan does not have z); in Monguor, ts and dz are found in words of Chinese and Tibetan origin and z is only found in words of Chinese origin; and in Eastern Yugur ts, dz, s, and z are only found in words of Chinese origin. In both Baonan and Monguor s is found in words of Mongolic origin, but normally it corresponds with f in Santa as in fugie 'big, large'; Baonan sge 'big, large'; Monguor sq3 'big, large'. s is also found in words of Chinese and Tibetan origin in both Baonan and Monguor.

As can be seen by the discussion above, Santa has incorporated the retroflex consonants into its phonological system to a much greater degree than Baonan (Tongren dialect), Monguor, or Eastern Yugur. This can most likely be accounted for by the influence of Linxia Hui on the Santa syllable inventory. For discussion of this see section 4.2 above.

⁴⁹ There are some instances of Script Mongolian si corresponding to ci as in ciaru 'coarse, rough' from sirügün (Kuribayashi 1989: 342).

Chapter 5

Morphology

5. Introduction

In this chapter, I will describe Santa morphology. After briefly discussing some of the differences between derivational and inflectional morphology, I will describe each of the major Santa derivational suffixes in section 5.2. In section 5.3 I will discuss the verbal complex in Santa and describe verbal inflectional morphology. Description of nominal inflectional morphology has been reserved for Chapter 7.

Santa is a typical SOV language with agglutinative strictly-suffixing morphology. There are no prefixes in Santa. When a suffix is added to a stem, there is always a clear cut boundary between the stem and the suffix.

Phonetically, there is little happening at the juncture where stem and suffix meet. The only phenomenon that I have encountered is the loss of stem-final /n/ or /ŋ/ when a suffix is added as in example (1).

- (1) ami-tu ‘alive, lively’ (from ami ‘life’)

However, this is not always the case. In example (2), the stem-final nasal is not lost.

- (2) osuŋ-tu ‘grassy’ (from osu ‘grass’)

In some instances both forms with and without the stem-final nasal exist as in (3). See section 5.2.6.1 for more on the suffix -tu which derives adjectives from nouns.

- (3) sakaŋ-tu ~ saka-tu ‘bearded’ (from saka ‘beard’)

Stress, which is ultimate in words of Mongolic origin in Santa (that is it falls on the last syllable of a word), usually shifts to the the last syllable when a suffix is added. (Stress is discussed in detail in section 4.3 above.)

A brief review of the juncture markers that precede suffixes is given below.⁵⁰ The symbol ‘-’ is used to show that the stress shifts to the last syllable as expected.

- (4) qa'ra ‘black, dark’ → qara-la ‘to become black, to become dark’

For a small subset of prefixes, the stress does not shift. These suffixes are preceded by ‘=’.

- (5) ə'tʃi ‘to go’ → ə'tʃi=nə ‘go’ + ‘IMP’

In two cases, when a disyllabic suffix is added, the stress only shifts to the first syllable of the disyllabic suffix. These suffixes are preceded by ‘+’.

- (6) ə'tʃi ‘to go’ → ətʃi+'dziwo ‘go’ + ‘PROG’
ə'tʃi ‘to go’ → ətʃi+'sənu ‘go’ + ‘DM’

5.1 Derivational vs. inflectional morphology

A summary of some of the differences often cited to distinguish between derivational and inflectional morphology is given in Table 5.1. For any given affix, the criteria in points A-D may not all equally apply. I will give some examples from Santa to illustrate each point (Bybee 1985).⁵¹

⁵⁰ I am making no claims with respect to the status of the suffix with these juncture markers. In other words, I am only indicating the stress assignment with these markers, not whether a particular marker is a suffix or a clitic.

⁵¹ Bybee (1985) is a cross-linguistic study of the relationship of meaning and form in the morphology of the world’s languages.

	Derivational affixes ...	Inflectional affixes ...
A.	<i>Change meaning or part of speech of the stem</i>	<i>Do not change meaning or part of speech of the stem</i>
B.	<i>Typically indicate semantic relations between the affix and its stem</i>	<i>Typically indicate syntactic or semantic relations between different words in the sentence</i>
C.	<i>Typically occur with only some members of a class of morphemes</i>	<i>Typically occur with all members of some large class of morphemes</i>
D.	<i>Typically occur closer to the stem in relation to inflectional affixes</i>	<i>Typically occur farther away from the stem in relation to derivational affixes</i>

Table 5.1: Comparison of Derivational and Inflectional Morphology

An example of a prototypical derivational suffix is -dan in (7). For more on -dan see section 5.2.1.1.

(7) jawu-dan ‘walking style’ (from jawu ‘to walk, to go’)

The meaning of the derived noun is ‘X-ing style’ or ‘X-ing method’. So we can see from Table 5.1 that for point A, the suffix changes the part of speech from a verb to a noun and it changes the meaning as well. For point B, the stem must be a verb and the derived word is a noun. This suffix is not found on any other parts of speech except verbs and when it is used it always derives nouns. For point C, this suffix only occurs with a small subset of verbs, not all of them. And for point D, the suffix must occur directly after the verb stem. No suffixes can occur before -dan. These are all qualities of a derivational suffix.

In contrast, an example of a prototypical inflectional suffix is -wo in (8). For more on -wo see section 5.3.2.1.5.1.

(8) qara-la-wo ‘became black’ (from qara ‘black’)

The suffix -wo indicates the perfective aspect. For point A in Table 5.1, it does not change the part of speech of the verb. The meaning of the verb does not change, although the aspectual meaning places the action of the verb in time as something already completed. For point B, the aspectual meaning of -wo places the event of a whole sentence, not just the verb, as being already completed. For point C, -wo is used on all verbs. For point D, the suffix comes after any derivational morphology. In this case, -wo comes after the derivational suffix -la which derives verbs from adjectives. (For more on -la see section 5.2.4.4.) These are qualities of an inflectional suffix.

5.2 Derivational morphology

This section includes discussion for each of the major derivational suffixes in Santa.

5.2.1 Nouns derived from verbs

The following suffixes all derive nouns from verbs: -dan, -sun, -dun, -liən, -si, and -n.

5.2.1.1 -dan

Discussed briefly above, the suffix -dan derives nouns from verbs with the meaning ‘style’ or ‘method’ of verb. I have not encountered it being used with Chinese loans.

- | | |
|----------------|---|
| (9) jawu-dan | ‘walking style’ (from jawu ‘to walk’) |
| (10) baikā-dan | ‘construction method’ (from baikā ‘to build’) |

5.2.1.2 -sun

The suffix -sun derives nouns from verbs that often refer to bodily fluids and by-products.

- (11) bandzə-sun 'vomit' (from bandzə 'to vomit')
 (12) hunGu-sun 'fart' (from hunGu 'to fart')

There are a number of nouns in Santa that refer to bodily fluids and organs that end in -sun but do not contain a root otherwise identifiable.⁵² This suggests that these forms are historically bi-morphemic and that -sun may therefore be an old Mongolic morpheme that refers to bodily fluids and organs. These are listed in (13).

⁵² There are a number of body part nouns in Santa that have common endings with no obvious stem. This is an area where some further historical investigation is needed.

-xi

oʃixi	'heel'
odzoxi	'penis'
taxi	'baldhead'
toki	'elbow'

-xə

dzuxə	'heart'
suxə	'armpit'
tʃuməxə	'marrow, spinal cord'

-run

furun	'lips'
irun	'pus'
nurun	'back, waist'
tɕiɕurun	'head'

(13)	şəsun	‘urine’
	bəsun	‘feces, excrement’
	nuşusun	‘saliva’
	tşusun	‘blood’
	koliəsun	‘perspiration, sweat’
	hosun	‘pus’
	arasun	‘skin’
	sidasun	‘arteries and veins, muscle’
	kidzəsun	‘intestines’
	somosun	‘eyelash’
	kuaisun	‘navel’
	usun	‘hair, feather’
	jasun	‘bone’

The suffix -sun is also used to derive nouns from verbs that do not have any relation in meaning to bodily fluids or organs. In (14), gadasun ‘nail’ is an item used in construction, not a fingernail.

(14) gada-sun ‘nail’ (from gada ‘to nail’)

5.2.1.3 Some unproductive V → N suffixes: -dun, -liən, -si, and -n

The following suffixes all derive nouns from verbs and the examples given are the only ones I have encountered so far.

The suffix -dun:

- (15) qana-dun ‘coughing sickness’ (from qana ‘to cough’)
 (16) çiniə-dun ‘jest, joke’ (from çiniə ‘to laugh’)

The suffix -liən:

- (17) sugiə-liən ‘curse’ (from sugiə ‘to curse’)

The suffix -si:

(18) *kiəliə-si* ‘dispute; message, news’ (from *kiəliə* ‘to speak’)

The suffix *-n*:

(19) *kiəliə-n* ‘language; tongue (body part)’
(from *kiəliə* ‘to speak’)

5.2.2 Nouns derived from nouns

There are three suffixes that derive nouns from nouns: *-tʃi*, *-si*, and *-run*.

5.2.2.1 *-tʃi*

When the suffix *-tʃi* is used, the derived noun has an agentive meaning as in ‘one who does X’.

- | | |
|--------------------------|---|
| (20) <i>fugia-tʃi</i> | ‘one who sells cattle’ (from <i>fugia</i> ‘cattle’) |
| (21) <i>tʃiaurun-tʃi</i> | ‘chieftain, ringleader’ (from <i>tʃiaurun</i> ‘head’) |
| (22) <i>darasu-tʃi</i> | ‘drunkard’ (from <i>darasun</i> ‘wine, alcohol’) |

It is also possible to use *-tʃi* to derive nouns from verbs.

- | | |
|------------------------|---|
| (23) <i>dadzia-tʃi</i> | ‘hired thug, hatchet man’
(from Chinese <i>dǎjià</i> ‘to fight’) |
| (24) <i>dawəi-tʃi</i> | ‘hunter’
(from Chinese <i>dǎwéi</i> ‘to encircle and hunt down’) |

In both (23) and (24), the stem is borrowed from Chinese. I have not encountered *-tʃi* being used to derive a noun from a Mongolic verb stem.

5.2.2.2 -si

The suffix -si is used to derive nouns from animate nouns. It is possible that it is a diminutive of some sort. The only example I know of a noun derived from a noun standing alone with -si is given below.⁵³

- (25) kəwə-si ‘child, son’ (from kəwən ‘boy, son’)

However, -si is often found along with the plural marker -la. For more on -la see section 7.2.6.3.

- (26) kəwə-si-la ‘children’ (from kəwən ‘boy, son’)
(27) otçi-si-la ‘daughters’ (from otçin ‘girl, daughter’)
(28) hə-si-la ‘they’ (from hə ‘he, she’)
(29) əxə-si-la ‘they’ (from əxən ‘he, she’)

5.2.2.3 -run

I have encountered only one instance of the suffix -run which derives nouns from nouns.

- (30) nudu-run waji ‘to cut an eyehole’ (from nudun ‘eye’)

5.2.3 Verbs derived from nouns ‘VNS’

The following suffixes derive verbs from nouns: -la, -liə, -da, -si, -dziə, -ta, -tşə, and -məre. The use of any particular suffix is predetermined depending on the noun. There is no variability of usage.

5.2.3.1 -la

The suffix -la derives verbs from nouns. The meaning of the derived verb frequently involves an instrumental use of the noun as in (31) and (32). In (33),

⁵³ There is also fugiası ‘both parents, elder member of a family’ which is derived from the adjective fugia ‘big, large’.

the meaning of the derived verb includes the original noun usu ‘water’ being used as a patient. However, all of these verbs are intransitive. The meaning of the derived verb in example (34) simply serves to make a verb from the noun.

- (31) gumusu-la ‘to pinch, to nip’ (from gumusun ‘fingernail, hoof’)
- (32) ikα-la ‘to use a bowl to measure’ (from ikα ‘bowl’)
- (33) usu-la ‘to drink water’ (from usu ‘water’)
- (34) dura-la ‘to wish, to hope’ (from duran ‘wish, hope, desire’)

The suffix -la can also be used to derive verbs from Chinese loans as in (35).

- (35) ʂəʔ-la ‘to sieve, to sift’
(from Chinese shāi’ér ‘sieve, sifter’)

5.2.3.2 -liə

The suffix -liə is similar to -la above. Some examples are given below. The meanings of the derived verbs includes uses of the underlying noun as a patient as in (36) and (37) and instrumental uses of the underlying noun as in (38).

- (36) əndəxi-liə ‘to lay an egg’ (from əndəxi ‘egg’)
- (37) bosu-liə ‘to pick off lice’ (from bosun ‘louse’)
- (38) odəu-liə ‘to crawl on one’s knees’ (from odəu ‘knee’)

The suffix -liə can also be used to derive verbs from Chinese loans as in (39).

- (39) gudu-liə ‘to bud’ (from Chinese gūduo ‘flower bud’)

5.2.3.3 -da

The meanings of verbs derived with the suffix -da also contain instrumental uses of the underlying noun.

- (40) fəɾəu-da ‘to use a slingshot’ (from fəɾəu ‘slingshot’)
 (41) haŋga-da ‘to clap, to slap, to pat’ (from haŋga ‘palm, hand’)
 (42) tosu-da ‘to oil, to soak in oil’ (from tosu ‘oil’)

The suffix -da is also used to derive verbs from Chinese nouns as in (43). However, the meaning of the derived verb is not instrumental.

- (43) ʂəŋ-da ‘to triumph, to be victorious’
 (from Chinese shèng ‘victory, success’)

5.2.3.4 Some unproductive N → V suffixes: -si, -dzia, -ta, -tʂə, and -məɾə

The following suffixes are used to derive verbs from nouns: -si, -dzia, -ta, -tʂə, and -məɾə. The examples given below are the only ones I am aware of.

The suffix -si is probably related to the one that derives verbs from adjectives in section 5.2.4.7. Both of the examples below are nature items.

- (44) gura-si ‘to get more rain’ (from gura ‘rain’)
 (45) tura-si ‘to raise a cloud of dust’ (from tura ‘soil, earth’)

The suffix -dzia:

- (46) tʂirəu-dzia ‘to saw’ (from tʂirəu ‘saw (noun)’)

The suffix -ta:

- (47) ʂuwa-ta ‘to become muddy, to sink into the mud’
 (from ʂuwa ‘mud’)

The suffix -tʂə is illustrated below. In this particular case, the noun is derived as well. See example (19) above.

- (48) kiəliə-n-tʂə ‘to chat, to converse’
 (from kiəliən ‘language; tongue (body part)’)

The suffix -məɾə is unusual in that it is two syllables.

- (49) *giə-mərə* 'to get an illness, to fall ill'
 (from *giən* 'illness, sickness')

5.2.4 Verbs derived from adjectives 'VAS'

The following suffixes are all used to derive verbs from adjectives: *-tu*, *-to*, *-da*, *-la*, *-lo*, *-sa*, *-si*, *-lu*, *-rə*, *-ra*, *-ro*, *-dzia*, and *-dzə*. Why does Santa have so many suffixes used for the same function? Part of the explanation lies in the fact that Santa has lost productive vowel harmony. Many of these suffixes are probably fossilized remnants from a time when vowel harmony was productive. These include *-la*, *-lo*, and *-lu*; *-rə*, *-ra*, and *-ro*; and *-tu* and *-to*. It is clear that many of these suffixes are no longer productive because there are only isolated examples.

Another reason is that some of the suffixes have different meanings. For instance *-sa* means 'to appear to be too X' where 'X' is the quality of the underlying adjective. Also, one of the meanings of *-si* is 'to appear to be X' or 'to seem to be X'.

Otherwise, the meanings of the derived verbs are all very similar. They either have an inchoative meaning where the quality denoted by the adjective is 'becoming' or 'starting to emerge', as in *dzoliərə* 'to become soft'; or they have an intensified meaning where the quality is already present but it is becoming stronger, as in *gundə* 'to deepen'. The only other meaning of the derived verbs is a strictly a predicative meaning of the adjective, as in *wairula* 'to zigzag, to wind' from *wairu* 'winding, zigzagging'.

Looking at the basic color terms and the inchoative suffixes used for each of them, we see there is variability with respect to which suffix is used.

- (50) qara-la 'to become black' (from qara 'black, dark')
- (51) tşiGa-tu 'to be white' (from tşiGan 'white')
- (52) xula-ra 'to become red, to redden' (from xulan 'red')
- (53) şira-tu 'to become yellow' (from şira 'yellow')
şira-la
- (54) noxo-tu 'to become green' (from noxon 'green')
noxo-ro
- (55) kugiə-tu 'to become blue' (from kugiə 'blue')
kugiə-rə
- (56) boro-lo 'to become grey' (from boro 'grey')

Given the seven basic color terms in Santa, there are 6 different suffixes used for the same inchoative function: -la, -tu, -ra, -ro, -rə, and -lo. In three cases, there are two possibilities. In each of these cases -tu is one of the choices.

Looking at some other verbs derived from adjectives, we also find cases where two suffixes are possible for the same meaning.

- (57) boxoni-da 'to become short' (from boxoni 'short')
boxoni-tu
- (58) fugiə-şi 'to become big' (from fugiə 'big')
fugiə-tu
- (59) şəngiə-rə 'to become thin, sparse'
şəngiə-tu (from şəngiən 'thin, sparse')

Although there are many examples of doublets like this, a derived verb with -tu is always one of the choices. I imagine this suffix is the more recent

innovation and that its usage has been generalized. This is the same pattern that was encountered with the color terms above.

These derivational suffixes are infrequently used with Chinese loans. -da can be found in a few cases, (60) being one instance. Otherwise there is only one example each of -tu and -si being used with Chinese adjectives. These are shown below.

- (60) buçin-da ‘to become weak, feeble’
 (from buçin ‘weak, feeble’ < from Chinese bùyíng ‘not well’)
- (61) dzanaŋ-tu ‘to become dirty, filthy’
 (from Chinese zāng’āng ‘dirty, filthy’)
- (62) tšidzia-ši ‘to appear to be strenuous’
 (from Chinese chījīn ‘strenuous’)

5.2.4.1 -tu

Verbs derived with the suffix -tu have an inchoative meaning. The usage of -tu is the most widespread of all the suffixes that derive verbs from adjectives.

- (63) šini-tu ‘to become new’ (from šini ‘new’)
- (64) šira-tu ‘to become yellow’ (from šira ‘yellow’)
- (65) dzoliə-tu ‘to become soft’ (from dzoliə ‘soft’)
- (66) fumuxi-tu ‘to become smelly’ (from fumuxi ‘smelly, foul’)

5.2.4.2 -to

The suffix -to is probably a fossilized vowel harmony remnant of the suffix -tu. This is the only example.

- (67) tšokə-to ‘to lessen, to decrease’ (from tšokəŋ ‘few, less’)

5.2.4.3 -da

Verbs derived from adjectives with the suffix -da have either an intensified meaning as in (68) or an inchoative meaning as in (69) and (70). This suffix is very common.

- (68) gun-da ‘to deepen, to become deep’ (from gun ‘deep’)
 (69) gau-da ‘to become well, to fully recover from an illness’
 (from gau ‘good’)
 (70) buçin-da ‘to become weak, to become feeble’
 (from buçin ‘weak, feeble’ < from Chinese bùxíng ‘not well’)

5.2.4.4 -la

Verbs derived with the suffix -la have either an inchoative meaning as in (71) and (72) or simply a predicating function as in (73). This suffix is found in many examples.

- (71) şira-la ‘to become yellow’ (from şira ‘yellow’)
 (72) taku-la ‘to become fat, to become stout’
 (from takun ‘fat, stout, plump’)
 (73) wairu-la ‘to zigzag, to wind, to become crooked’
 (from wairu ‘winding, crooked’)

5.2.4.5 -lo

The suffix -lo is probably a fossilized vowel harmony remnant of -la. This is the only example.

- (74) boro-lo ‘to become grey’ (from boro ‘grey’)

5.2.4.6 -sa

When the suffix -sa is used, the derived verbs mean either ‘to appear to be too X’ or ‘to seem to be too X’ where ‘X’ is the quality of the underlying adjective.

- (75) undu-sa ‘to appear to be too tall’ (from undu ‘tall’)
 (76) boçoni-sa ‘to appear to be too short’ (from boçoni ‘short’)
 (77) biədu-sa ‘to appear to be too thick’
 (from biədu ‘thick, wide’)

5.2.4.7 -şi

The suffix -şi has two basic meanings. The first is an inchoative meaning as in examples (78) and (79).

(78) quıdu-şi ‘to become hard, to harden’ (from quıduŋ ‘hard, stiff’)

(79) mıla-şi ‘to become small’ (from mıla ‘small’)

The second is ‘to seem to be X’ or ‘to appear to be X’ where ‘X’ is the quality of the underlying adjective.

(80) axuəi-şi ‘to seem to be wide’ (from axuəi ‘wide, broad’)

(81) udaŋ-şi ‘to seem to be slow’ (from udaŋ ‘slow’)

5.2.4.8 -lu

Verbs derived with -lu have an inchoative or predicative meaning as in (82) through (84).

(82) aru-lu ‘to clean, to become clean’ (from aruŋ ‘clean’)

(83) otçiau-lu ‘to be old, to become old’ (from otçiau ‘old’)

(84) quşu-lu ‘to ache, for the muscles to be sore’

(from quşuŋ ‘hard, laborious’)

This suffix is probably the result of the grammaticization of the verb olu with the inchoative meaning ‘to become’. A non-grammaticized example is given in (85). Compare this with example (86).

(85) qara olu ‘to become dark, for evening to set’

(86) qara-la ‘to become black’ (from qara ‘black, dark’)

5.2.4.9 -rə

Verbs derived with -rə have an inchoative meaning.

- (87) *kugiə-rə* 'to become blue' (from *kugiə* 'blue')
 (88) *dzoliə-rə* 'to become soft' (from *dzoliən* 'soft')
 (89) *kuəitçiə-rə* 'to become cold' (from *kuəitçiən* 'cold, frigid')

This suffix may be the result of the grammaticization of the verb *irə* which means 'to come'. *irə* is often used as a sentence-final verb in clause-chaining constructions and its meaning is often bleached.

5.2.4.10 Some unproductive Adj → V suffixes: *-rə*, *-ro*, *-dziə*, and *-dzə*

As with most of the suffixes previously described, verbs derived with these suffixes have an intensified, inchoative, or simply a predicative meaning. Examples shown are the only ones I have encountered.

Verbs derived with *-rə* have an intensified meaning as in (90) or an inchoative meaning as in (90) through (93).

- (90) *xula-rə* 'to redden, to become red' (from *xulan* 'red')
 (91) *wəita-rə* 'to become narrow' (from *wəitan* 'narrow')
 (92) *quaitçi-rə* 'to become worn' (from *quaitçən* 'worn, old, used')
 (93) *dziəxuəi-rə* 'to become poor' (from *dziəxuəi* 'poor')

The suffix *-ro* is probably a fossilized vowel harmony remnant of *-rə*.⁵⁴

- (94) *noxo-ro* 'to become green' (from *noxon* 'green')

Verbs derived with the suffix *-dziə* have either an inchoative meaning as in (95) and (96) or an intensified meaning as in (97) and (98).

⁵⁴ It is unclear to me whether *-rə* and *-ro* could be vowel harmony remnants of *-rə*, since the source of *-rə* may be *irə* 'to come'.

- (95) undu-dzia 'to become tall' (from undu 'tall')
 (96) fudu-dzia 'to become long' (from fudu 'long')
 (97) gun-dzia 'to deepen' (from gun 'deep')
 (98) gundu-dzia 'to gain weight, to add weight'
 (from gundu 'heavy')

When the suffix -dzə is used, the derived verbs have either an inchoative meaning as in (99) through (101) or simply a predicating function as in (102).

- (99) *baja-dzə* 'to become rich' (from *bajan* 'rich, wealthy')
 (100) *biədu-dzə* 'to become thick' (from *biəduŋ* 'thick, wide')
 (101) *quidu-dzə* 'to become hard, to harden'
 (from *quiduŋ* 'hard, stiff')
 (102) *giərən-dzə* 'to shine, to be luminous'
 (from *giəran* 'bright, luminous, shiny')

5.2.5 Verbs derived from verbs

There are two types of verbal derivation from verbs. The first type I have called *borrowed verb suffixes* (BVS). The other type of suffix is one that derives a verb with a new meaning from another verb. Examples of this latter type are rare however.

5.2.5.1 Borrowed verb suffixes ‘BVS’

The only function of borrowed verb suffixes (BVS) is to indicate that the verb is borrowed from Chinese. Because of this, they only exemplify some of the characteristics of derivational suffixes. The main difference is that they neither change the part of speech nor the meaning of the verb. In the other points discussed in Table 5.1 above, they behave like derivational morphology.

There are two suffixes that are affixed to monosyllabic verbs borrowed from Chinese: -ji and -dzi. There is also the verb giə ‘to do’ which follows disyllabic verbs borrowed from Chinese. These are quite productive in Santa. And

finally, there are a few suffixes which are less common that are found on monosyllabic and disyllabic verbs alike. These are -la, -lo, -lia, -tci, -rə, and -ro.

5.2.5.1.1 -ji

The suffix -ji is affixed to monosyllabic verbs borrowed from Chinese that end in a non-nasal. Some examples are given below.

- | | |
|---------------|---|
| (103) dza-ji | 'to pound, to smash' (from Chinese <u>zá</u>) |
| (104) tau-ji | 'to draw out, to fish out' (from Chinese <u>tāo</u>) |
| (105) dziu-ji | 'to save' (from Chinese <u>jiù</u>) |

5.2.5.1.2 -dzi

The suffix -dzi is affixed to monosyllabic verbs borrowed from Chinese that end in a nasal. Some examples are given below.

- | | |
|----------------|--|
| (106) niŋ-dzi | 'to wring, to twist' (from Chinese <u>níng</u>) |
| (107) bian-dzi | 'to change' (from Chinese <u>biàn</u>) |
| (108) guan-dzi | 'to be in charge, to manage' (from Chinese <u>guǎn</u>) |

Aspectual verbal morphology is affixed after the BVS, as in (109).

- (109) ənə dosi-ni dzukə bian-dzi-wo. T4:070
 this friend-GN heart change-BVS-PRF
This friend's heart changed.

5.2.5.1.3 giə

The verb giə 'to do' generally follows disyllabic verbs borrowed from Chinese. It is included here because it resembles a regular morphological process. Some examples are given below.

- (110) *dənwu giə* ‘to delay, to hold up’ (from Chinese dānwù)
 (111) *lijuŋ giə* ‘to use, to utilize’ (from Chinese lìyòng)
 (112) *jəutʂəu giə* ‘to be sad, to be worried’ (from Chinese yōuchóu)

Aspectual verbal morphology is affixed to the the verb *giə*, not to the borrowed verb. When *giə* is used in this way, it resembles an auxiliary verb.

- (113) *ɪŋgiə-sə galadzi dajin giə+dziwo.* MP:27
 and.so-DI magpie agree do+PROG
And so the magpie agrees.

It is clear that *giə* is a verb and not a suffix because it can occur independently. In addition, the borrowed disyllabic verb maintains its own stress pattern when *giə* is used in combination with it.

5.2.5.1.4 Other BVS suffixes: *-la*, *-lo*, *-liə*, *-tɕi*, *-rə* and *-ro*

In addition, to *-ji*, *-dzi*, and *giə*, there are some other BVS suffixes. *-la* is one of the most frequently encountered of these. Some examples are given below.

- (114) *ʂaŋ-la* ‘to stitch the sole (of a shoe) to the upper’
 (from Chinese shàng ‘to stitch the sole (of a shoe) to the upper’)
 (115) *tɕiaŋ-la* ‘to rob, to seize’ (from Chinese qiǎng)

The BVS *-lo* may be a vowel harmony remnant of *-la*. This is the only example.

- (116) *dzuəŋ-lo* ‘to load, to pack’ (from Chinese zhuāng)

There are a few examples of the BVS *-liə*. A couple of these are given below.

- (117) *dzəŋ-liə* ‘to evaporate, to steam’ (from Chinese zhēng)
 (118) *dziə-liə* ‘to greet, to meet’ (from Chinese jīē)

- (128) jawu-la ‘to walk behind’ (from jawu ‘to walk, to go’)
 (129) anda-la ‘to open, to unfold’
 (from anda ‘to release, to let go’)

There is only one example of the suffix -ra. Notice the similarity in meaning of (130) with (129) above.

- (130) anda-ra ‘to extend, to unfold’
 (from anda ‘to release, to let go’)

5.2.6 Adjectives derived from nouns ‘ANS’

There are two suffixes that derive adjectives from nouns, -tu and -ra.

5.2.6.1 -tu

The suffix -tu is quite productive. It can be used to derive adjectives from borrowed nouns as well as in (132) and (133).

- (131) giən-tu ‘ill, sick’ (from giən ‘illness, sickness’)
 (132) bənši-tu ‘capable, skillful’
 (from Chinese běnsì ‘skill, capability’)
 (133) ‘aḡili-tu ‘intelligent, resourceful’
 (from ‘aḡili ‘wisdom, intelligence’ < from Arabic ʔaql)

5.2.6.2 -ra

The suffix -ra is less common with only three examples given below. The adjectives are all derived from nouns that refer to body waste and fluids.

- (134) ṣəsu-ra ‘of an old urine pit’ (from ṣəsū ‘urine’)
 (135) basu-ra ‘shitty’ (from basū ‘feces, excrement’)
 (136) qawa-ra ‘snotty nosed’ (from qawā ‘nasal mucus’)

5.2.7 Negative adjectives derived from nouns

u is used after some nouns to derive adjectives that have negative meanings. The marker is used with borrowed nouns as well as in (139). u is not a suffix because it receives its own stress without affecting the stress of the word it follows. Notice in example (138) that the locative case suffix -də is attached before u. These are all the examples I know of.

- (137) durən u ‘no desire, hopeless’ (from durən ‘desire, hope’)
(138) ojin-də u ‘not happy, not pleased, not satisfied’
 (from ojin ‘feeling, emotion, state of mind’)
(139) şumu u ‘countless, innumerable’
 (from Chinese shùmù ‘amount, number’)

5.2.8 Adjectives derived from verbs

There is one suffix that derives adjectives from verbs: -lan.

5.2.8.1 -lan

The examples below are the only instances of the suffix -lan that I am aware of.

- (140) bajasu-lan ‘joyful’ (from bajasu ‘to be happy’)
(141) tsudu-lan ‘full (from eating)’ (from tsudu ‘to be full’)

5.2.9 Adjectives derived from adjectives

There are two types of strategies used to derive adjectives from adjectives: the infix/suffix combination of -pa- ~ -pu- along with -kan and the suffix -lon.

5.2.9.1 -pa- ~ -pu- with -kan

One of the most unusual morphological strategies found in Santa is an infix/suffix combination used only in color terms. The infix -pa- ~ -pu- is inserted after the first syllable of the color term and the suffix -kan is attached to the resulting stem. The derived adjective has an intensified meaning from the original

color term, so ‘red’ becomes ‘very red’ and ‘yellow’ becomes ‘yellow-orange’ which can be understood as a more intensified form of yellow. The suffix -kaŋ may be related to the intensifier suffix (see section 5.3.3) but the Script Mongolian for ‘red’ is hulayan which makes -kaŋ not look like a suffix at all, but a retention of the older pronunciation. Evidence against this position is twofold: 1) VyV sequences became VV sequences in the modern Mongolic languages and in Santa VV sequences (long vowels) have become V (see section 4.5 above for more on this; and 2) the Script Mongolian word for ‘yellow’ is sira with no trace of the final -yan. The examples below are the only ones I am aware of in Santa, but in Baonan Mongolian, there are similar examples of this phenomenon (Charles N. Li, personal communication.)

(142) xu-pa-la-kaŋ ~ xu-pu-la-kaŋ ‘very red’ (from xulan ‘red’)

(143) ši-pa-ra-kaŋ ~ ši-pu-ra-kaŋ ‘yellow-orange’ (from sira ‘yellow’)

5.2.9.2 -lon

There is only one example of the suffix -lon deriving an adjective from another adjective.

(144) doŋo-lon ‘crippled, lame’ (from doŋon ‘bad, ugly’)

5.2.10 Borrowed adjective suffix (BAS)

There are two suffixes that only appear on borrowed adjectives: -ni and -matša.

5.2.10.1 -ni

Some borrowed adjectives in Santa are borrowed with the Chinese marker =dzi which is a palatalized version of Chinese de. The function of this marker is to show that whatever it is suffixed to is in a modifying relationship with whatever follows. There are only five examples of borrowed Chinese adjectives with the marker de and these are shown below.

- (145) dzɯŋjau=dʒi 'important' (from Chinese zhòngyàode)
 (146) ɕiəntʂəŋ=dʒi 'ready-made' (from Chinese xiàrchéngde)
 (147) ɕiəŋsi=dʒi 'alike, similar' (from Chinese xiāngsìde)
 (148) fənsən=dʒi 'scattered' (from Chinese fēnsànde)
 (149) ijaŋ=dʒi 'same' (from Chinese yīyāngde)

Most adjectives borrowed from Chinese have the indigenous suffix -ni, which functions the same way in Santa as the Chinese marker =dʒi does in Chinese. Thus -ni is a calque of Chinese =dʒi and in this way indicates that the adjective is borrowed. -ni does not occur with indigenous adjectives, and thus it is not a grammatical marker. Some examples are given below.

- (150) ʂulian-ni 'skilled' (from Chinese shùliànde)
 (151) dʒia-ni 'fake, artificial' (from Chinese jiǎde)
 (152) nan-ni 'difficult' (from Chinese nànde)

In two cases, the Santa suffix -ni is found along with the Chinese marker dʒi which has been borrowed as a chunk with the adjective.

- (153) sudʒi-ni 'plain (not fancy)' (from Chinese sùde)
 (154) xuadʒi-ni 'flowery' (from Chinese huāde)

5.2.10.2 -matʂa

The suffix -matʂa only occurs in two instances. In the first example (155), the stem is borrowed from Chinese. In (156), the source of the stem is unknown. In both cases though, the quality of the adjective refers to position in space.

- (155) ɕiə-matʂa 'tilted, inclined, slanting' (from Chinese xié)
 (156) xuai-matʂa 'horizontal, transverse' (from unknown source)

5.2.11 Suffixes added to question-word proforms

There are three ways to derive the meaning 'no matter X' where 'X' is a question-word proform. These are -ma ~ -mə, -kaŋ boʂoŋ, and liaudʒə.

5.2.11.1 -ma ~ -mə

The suffix -ma ~ -mə is added to question-word proforms with the resulting meaning ‘no matter X’ where ‘X’ is a question-word proform.

- (157) ali-ma ‘no matter which one’ (from ali ‘which’)
- (158) giədzə-ma ‘no matter when’ (from giədzə ‘when’)
- (159) ja-ma ‘no matter what’ (from jan ‘what’)
- (160) matu-ma ‘no matter how’ (from matu ‘how, what’)
- (161) kiə-mə ‘no matter who’ (from kiən ‘who’)
- (162) qala-ma ‘no matter where’ (from qala ‘where’)

5.2.11.2 -kaŋ boʁoŋ

Another strategy is to add -kaŋ boʁoŋ to the question-word proform. (boʁoŋ does not have an independent lexical meaning.) The resulting meaning is the same, ‘no matter X’. This strategy is limited to the following cases.

- (163) ali-kaŋ boʁoŋ ‘no matter which one’ (from ali ‘which’)
- (164) kiə-kaŋ boʁoŋ ‘no matter who’ (from kiən ‘who’)
- (165) matu-kaŋ boʁoŋ ‘no matter how, what, which’
(from matu ‘how, what’)

5.2.11.3 liəudzə

There is yet another morphological strategy for deriving the same meaning, ‘no matter X’. In this case liəudzə is borrowed from Chinese liǎozhě and means ‘since, now that’ when it is used alone.

- (166) giədzə liəudzə ‘no matter when’ (from giədzə ‘when’)
- (167) giədun liəudzə ‘no matter how many’
(from giədun ‘several, some’)

5.2.12 Suffixes added to numerals

There are a few suffixes that are found on numerals. In Santa, only the numerals one through ten are indigenous. All other numerals are borrowed from Chinese. See section 7.2.2 for more on numerals.

5.2.12.1 -liə

The suffix -liə is added to numerals with the meaning ‘altogether’. It can be found on borrowed Chinese numerals as in (170) and on quantifiers as in (171).

- | | |
|--------------------|---|
| (168) tawu-liə | ‘five altogether’ (from <u>tawuŋ</u> ‘five’) |
| (169) jəsu-liə | ‘nine altogether’ (from <u>jəsun</u> ‘nine’) |
| (170) sanʃiqiə-liə | ‘thirty altogether’ (from Chinese <u>sānshíqè</u> ‘thirty’) |
| (171) qiədu-liə | ‘several people altogether’ |
| | (from <u>qiəduŋ</u> ‘several, some’) |

An interesting point is that in example (170), the borrowed Chinese numeral sanʃiqiə ‘thirty’ includes the classifier qiə (from Chinese qè) which has been borrowed along with the numeral as one chunk. Santa does not have indigenous classifiers, although measure words are common. See section 7.2.3 for more on this.

5.2.12.2 -da

The suffix -da is added to numerals to indicate birth order in the family.

- | | |
|----------------|--|
| (172) Guə-da | ‘second eldest’ (from <u>Guə</u> ‘two’) |
| (173) Gura-da | ‘third eldest’ (from <u>Guraŋ</u> ‘three’) |
| (174) nəima-da | ‘eighth eldest’ (from <u>nəimaŋ</u> ‘eight’) |

5.2.12.3 -dzia

The suffix -dzia is added to numerals to indicate how many ‘pieces each’. It can also be found on Chinese borrowed numerals as in (177) and quantifiers as in (178). Notice once more the borrowed Chinese classifier qiə appears in (177).

- (175) *niə-dzia* 'one piece each' (from *niə* 'one')
- (176) *dziərua-dzia* 'four pieces each' (from *dziəron* 'four')
- (177) *əʃigia-dzia* 'twenty pieces each'
(from Chinese *èrshíge* 'twenty')
- (178) *giədu-dzia* 'several each' (from *giəduŋ* 'several, some')

5.2.12.4 *-kaŋ*

The suffix *-kaŋ* is added to numerals to indicate 'only X pieces' where 'X' is a numeral. The suffix *-kaŋ* can also be found in combination with *-liə* 'altogether' which it follows as in (180).

- (179) *tawu-kaŋ* 'only five pieces' (from *tawuŋ* 'five')
- (180) *tawu-liə-kaŋ* 'only five pieces altogether' (from *tawuŋ* 'five')

5.2.12.5 *-i*

The suffix *-i* is added to numerals when they precede certain measure words. (The measure word *ka* is a shortened form of the noun *ika* 'bowl'.)

- (181) *guar-i ʃuaŋ* 'two pairs' (from *guar* 'two')
- (182) *dziəi-i ka* 'six bowls of' (from *dziəron* 'six')
- (183) *har-i fa* 'ten times' (from *haron* 'ten')

5.2.13 Reduplicatory morphological processes

There are two related types of reduplicative morphological processes that occur in Santa: the first involves reduplication with some phonological alternation of the reduplicated item; the second type does not.

In the first type of reduplication, the entire word is reduplicated, but the first consonant and the first vowel of the reduplicated item is replaced with /ma/. The final *dzi* is a palatalized version of the Chinese marker *de* used in adverbials. (For more on adverbials see section 8.2.2.1.) The marker *de* is used to show that whatever precedes it modifies whatever follows. These are the only two examples of this type of reduplication that I have encountered in Santa, but Chen Xiaoyun

(1988) describes a similar process occurring in Khazakh, a Turkic language of northwestern China.

(184) *dʒindan mandan=dʒi* ‘hurriedly’ (from *dʒindan* unknown source)

(185) *dzanaŋ manaŋ=dʒi* ‘filthy’ (from Chinese *zāng’āng* ‘filthy’)

The second type, which is more common, is found in adverbials and onomatopoeia. There are a few different subtypes. The first subtype is where one, two, or three syllable strings are reduplicated as in (186) through (188). Only example (187) comes from a previous source that is known.

(186) *dʒir dʒir* ‘depicts the sound of water in a brook’

(187) *godəi godəi* ‘in a bending forward manner’
(from *godəi* ‘to bend down’)

(188) *qudukuŋ qudukuŋ* ‘bent upwards and swaying’

Another type is the kind found in (189) where each syllable is repeated first.

(189) *dʒiændʒiən kuaŋkuaŋ* ‘in a jolting manner’
(from Chinese *dīān* ‘jolt, bump’ and *kuāng* ‘crash, bang’)

The marker *=dʒi* is usually found after adverbials and onomatopoeia. It is used to indicate that whatever precedes it is in a modifying relationship with whatever follows.

(190) *tʃatʃa=dʒi* ‘depicts the sound of clashing cymbals’
(from Chinese *chǎ* ‘small cymbals’)

(191) *laŋsa laŋsa=dʒi* ‘in a loitering manner’

5.3 Inflectional morphology

In this section, I will list and describe Santa inflectional morphology. However, the discussion on nominal inflectional morphology has been reserved for Chapter 7.

5.3.1 Nominal inflectional morphology

Nominal inflectional morphology includes case, number, and reflexive suffixes.

5.3.1.1 Case

Case relations are marked on nouns by a series of markers. These are -Ø 'NOMINATIVE', -ni ~ -ji 'ACCUSATIVE, GENETIVE', -də 'DATIVE, LOCATIVE', -sə 'ABLATIVE', =galə 'INSTRUMENTAL', and -lə 'COMITATIVE'. These are discussed in greater detail in Chapter 7 in section 7.3.

5.3.1.2 Number

The plural marker in Santa is -lə. Number is marked mostly on animate nouns in Santa. Number is discussed in Chapter 7 in section 7.2.6.3.

5.3.1.3 Reflexive

There are two markers that indicate reflexive meanings on nouns in Santa. These are -nə 'REFLEXIVE/POSSESSIVE' and -nukun 'REFLEXIVE'. These are discussed in greater detail in Chapter 7 in section 7.2.6.5.

5.3.2 The verbal complex

The verbal complex in Santa consists of a verb optionally preceded by a negative marker (discussed in section 5.3.2.2) and optionally followed by an auxiliary verb (discussed in section 5.3.2.3). Verbal inflectional morphology is attached directly to the verb or to the auxiliary verb if one is present. The verbal complex is illustrated in below.

(192) The verbal complex
(Neg) V (Aux)

5.3.2.1 Verbal inflectional morphology

In this section I will discuss verbal inflectional morphology in Santa. In section 5.3.2.1.2 I will look at the causative and collective/reciprocal markers; in section 5.3.2.1.3 I will look at mood; and in section 5.3.2.1.5 I will look at aspect. In Chapter 8, section 8.3 there is an in-depth study of switch-event markers.⁵⁵

But before moving on, I will look at the non-finite/finite verb distinction in Santa and look at the internal structure of the verb complex in non-finite and finite verbs.

5.3.2.1.1 *Non-finite and finite verbs*

In many languages there is a formal distinction between finite and non-finite verbs. Finite verbs are those which are marked for tense and aspect. Non-finite verbs do not carry this marking. In Santa, there is no grammatical category of tense, only aspect. Santa finite verbs are therefore marked only for aspect. Neither finite nor non-finite verbs are marked for person, number, or gender in Santa. See section 5.3.2.1.5 for a more detailed discussion of the aspect categories in Santa.

In Santa there is at most one finite verb per sentence. A sentence need not have a finite verb however. When a sentence has more than one verb, and one of these verbs is finite, it will be the last verb of the sentence. If the sentence contains any other verbs, then they will necessarily be non-finite.

A distinction related to the non-finite/finite one is the medial/final distinction. If there is a finite verb in the sentence, it is the sentence-final verb. Any other verbs that precede the sentence-final verb are considered medial verbs. But since a sentence need not have a finite verb, a sentence-final verb could be non-finite. An instance of this would be a verb in the imperative mood.

A verb stem may be formed by using one of many derivational suffixes. Some examples are given below.⁵⁶

⁵⁵ I will define and motivate the use of this term later in the Chapter 8.

⁵⁶ However most verb stems in Santa are not derived.

- | | |
|-----------------|--|
| (193) fəɾəuda- | ‘to use a slingshot’ (from fəɾəu ‘slingshot’) |
| (194) otɕiaulu- | ‘to be old, to become old’ (from otɕiau ‘old’) |
| (195) kuɕji- | ‘to praise, to honor’ (from Chinese kuā) |

In (193), the stem fəɾəuda ‘to use a slingshot’ is derived from the noun fəɾəu ‘slingshot’ by means of the VNS suffix -da. In (194), the stem otɕiaulu ‘to be old, to become old’ is derived from the adjective otɕiau ‘old’ by means of the VAS suffix -lu. And in (195), the stem kuɕji ‘to praise, to honor’ is derived from the Chinese verb kuā by means of the BVS suffix -ji. For more on these derivational suffixes see Chapter 5.

Any verb stem may be marked with the causative or the collective/reciprocal marker. These markers precede both the non-finite and finite verb markers.

Non-finite verbs may be marked for mood and/or switch-event. If the non-finite verb is in the imperative mood, then it is final. This is indicated by the shading in Table 5.2. No other verbs may follow it and no other suffixes, excluding the causative and the collective/reciprocal, may be attached to it. If the verb is in the desiderative mood, it may be either a medial or a final verb. If it is a final verb, no other suffixes, excluding the causative and the collective/reciprocal, may be attached to it. Switch-event markers are attached only to medial verbs and may co-occur with the desiderative mood. The non-finite verb complex is illustrated in Table 5.2.

If the verb is finite, then in addition to causative and collective/reciprocal marking, it is marked for one of three aspects: perfective, imperfective, or progressive. Verbs marked with aspect are final. This is indicated by the shading in Table 5.3. The finite verb complex is illustrated in Table 5.3.

The same verb stem may not take both non-finite marking in Table 5.2 and the finite marking in Table 5.3. These markers are mutually exclusive.

	Stem markers		Non-finite markers	
Stem	Causative	Reciprocal	Mood	Switch-event
	Causative	Reciprocal	Imperative Desiderative	Implicative Sequential Immediate Sequential Simultaneous Integrative Purposive Complement

Table 5.2: Non-finite verb complex

	Stem markers		Finite markers
Stem	Causative	Reciprocal	Aspect
	Causative	Reciprocal	Perfective Imperfective Progressive

Table 5.3: Finite verb complex

5.3.2.1.2 Causative and collective/reciprocal markers⁵⁷

The causative and reciprocal markers are attached directly to the verb stem. They are the only markers that can occur with both non-finite and finite verb forms. Another feature that they share is that they may be used to change the valency of the verb. The causative marker normally raises the valency of the verb, while the reciprocal usage of collective/reciprocal marker may reduce the valency of the verb.

The causative and the collective/reciprocal markers may co-occur. When they do, the causative precedes the collective/reciprocal marker. An example of a verb marked with both the causative and the collective/reciprocal markers is given below.

- (196) "mi-ni ɕiaŋdzi-ni miəngu-ni bu godziə-ka-ndu-Ø." A1:119
 1SG-GN chest-AS silver-AC IMPR.NEG move-CS-C/R-IMPR
"[You guys] do not move my chest of silver."

⁵⁷ Bu (1986) and Liu (1981) use the term 'voice' to cover both the causative and the collective/reciprocal markers. Traditionally, voice categories include active, passive, anti-passive, and middle. One feature that these markers do share with traditional voice categories is that they may be used to increase or decrease the valency of the verb.

Santa does not have an active/passive voice distinction. The example below is representative of a construction that is used in the absence of passive voice.

- ənə otɕin-ni hə kəwəŋ-də duan-dzi-wo. T5:89
 this girl-AC that boy-DT break.up-BVS-PRF
This girl and that boy were broken up (by somebody).

The agent is unknown and not recoverable from the previous context. So it is simply not expressed.

Notice that this example is in the imperative mood as well. This sentence is being addressed to some porters who are looking for accommodations, so the -ndu suffix is collective in this case.

5.3.2.1.2.1 Causative -kɑ ~ -kə

The causative marker in Santa is -kɑ. It has a phonetic variant -kə which is unproductive. It is probably a remnant from a time when vowel harmony was productive in Santa. Some examples are given below, but these are very rare.⁵⁸

- (197) *giən udzə-kə* ‘to see a doctor’ (*lit.* ‘to cause sickness to be seen’)
kuəitɕiə-kə ‘to become cold (of weather)’ (*lit.* ‘to make cold’)
 (from *kuəitɕiən* ‘cold’ Adj)

When the causative marker is suffixed to an intransitive verb, the causative meaning of the verb is ‘to make/force X do Y’ where ‘X’ is the causee, the person being made to carry out the action ‘Y’. The action ‘Y’ will have the causative suffix -kɑ and ‘X’, the subject of the original intransitive verb, will now be in the accusative case. This process is known as increasing the *valency* of the verb because an originally intransitive verb may now have two arguments. An example is given below.

- (198) *ɕiəni-də=ni lama ənə kəwɑŋ-ni osuŋ giə-də-nə kidziə-kɑ-wo.* A1:074
 night-LC=TM lama this boy-AC grass house-LC-RP sleep-CS-PRF
And so the lama made this boy sleep in the grass house.

In this example, the normally intransitive verb *kidziə* is marked with the causative suffix -kɑ. The subject of the causative verb, or the causer, is the *lama* ‘lama’, and it is in the nominative case. The subject of the once intransitive verb, or the causee, is *ənə kəwɑŋni* ‘this boy’. It is relegated to the accusative case.

⁵⁸ *giən udzə-kə* is ‘sickness see-CS’. In my database, I have some examples of this lexical item, but they all have -kɑ not -kə as the causative marker.

There is also a permissive meaning of the intransitive causative verb which is ‘to let X do Y’. An example of this is illustrated in (199).

- (199) *ingiə-sə ənə kuŋ-ni nokian-də bau-ka-wo.* T4:021
 and.so-DL this person-AC hole-DT go.down-CS-PRF
And so [he] let this person go down into the hole.

In this example the causative suffix is affixed to the normally intransitive verb *bau* ‘to go down’. The subject of the once intransitive verb, or the causee, is *ənə kuŋni* ‘this person’. It receives accusative case-marking. Notice that in this example there is no explicit causer.

When the causative marker *-ka* is suffixed to a transitive verb, the meaning is ‘to make/force X to do Y to Z’ where ‘X’ is the causee, the person being made to carry out the action ‘Y’ and ‘Z’ is the patient of the action ‘Y’. This construction is different from the causative construction derived from an intransitive verb in that ‘X’, the causee, is relegated to the dative case instead of the accusative case. The patient of the normally transitive verb may be in the accusative case, but it may also be unmarked. An example of this is shown below.

- (200) *ingiə mila kawən-də [ədziŋəŋ bəʒ] bari-ka-wo.* A2:015
 and.so small son-DT some money take-CS-PRF
And so [the mother] made the younger son to take some money.

In (200), the patient of the once transitive verb is *ədziŋəŋ bəʒ* ‘some money’, and in this case is unmarked morphologically since accusative marking is not obligatory. Context and word or cues serve to clarify its role. The causee *mila kawəndə* ‘the younger son’, the subject of the once transitive verb *bari* ‘to take’ is in dative case morphologically. A similar example is given below.

(201) lama goron-la-ni su-dzi aru-ka=də
 lama courtyard-PL-AC sweep-SS clean-CS=DQ

[niə tuxon takan-ni] nokəi-də idziə-ka-wo. A1:100
 one bowl noodles-AC dog-DT eat-CS-PRF

Once the lama swept the courtyards clean, he made the dog eat a bowl of noodles.

In this case, the patient of the once transitive verb *idziə* ‘to eat’ is *niə tuxon takan-ni* ‘a bowl of noodles’. This time it is in the accusative case. The causee, *nokəidə* ‘the dog’ is in the dative case.

An example of the permissive meaning of a causative derived from a transitive verb is given in (202).⁵⁹

(202) “niənəi, niənəi!
 old.woman old.woman

[tʃi ban-sə-nə] ma-də niə idziə-ka-Ø.” T2:33
 2SGNM honey-AB-RP 1SG-DT one eat-CS-IMPR

“Old woman, old woman! Let me eat a little from your honey.”

In this example, the speaker *madə* ‘I’ is the causee and is in the dative case as expected. However, *ban-sənə* ‘from your honey’ is not in the accusative but in the ablative case. In addition, it is marked with the reflexive/possessive marker *-nə*. The circumstances which allow for the patient of the originally transitive verb to be in the ablative case is as yet unclear. We do know that the *idziəka* ‘to cause to eat’ was derived from the transitive verb *idziə* ‘to eat’ and not an intransitive one because the causee is in the dative case, not the accusative. Instances like this deserve further attention.

⁵⁹ The numeral *niə* ‘one’ preceding the causative verb delimits the action of the verb to ‘a little bit’.

5.3.2.1.2.2 Collective/Reciprocal -ndu

The collective marker expresses the fact that the action of the verb is being carried out by multiple participants collectively. The reciprocal marker expresses the fact that the action of the verb is mutually carried out by multiple participants toward or upon each other. Whether the action is interpreted as collective or reciprocal depends on the semantic content of the verb.

An example of the collective usage is given in (203) where three celestial beings rested together.

- (203) ɕiəni-də=ni ɠuraŋ ʂəŋɕiəŋ iɾə=də
 night-LC=TM three celestial.being come=DQ

ɠudəu buluŋ-də hamara-ndu-wo. A2:029
 well edge-LC rest-C/R-PRF

At night, three celestial beings came and rested together at the well's edge.

In the next example, the action is reciprocal because the white snake and the black snake are beating each other.

- (204) niə udu-də=ni ənə kəwaŋ ula-də ətʂi-sə
 one day-LC=TM this boy mountain-LC go-DL

[niə ɠara moɠəi] [niə tsigaŋ moɠəi] ɠuala əɣu-ndu+dziwo. T6:004
 one black snake one white snake two beat-C/R+PROG

One day, as the boy was going up the mountain, a black snake and a white snake were beating each other.

When the action is reciprocal, the valency of the verb is reduced. This is because the normally transitive verb, əɣu 'to beat' in this example, does not have a subject and an object. Rather there are two subjects who are directing their

action toward each other. Another example of the reciprocal marker is given in (205).

- (205) “əda matəŋ guala gəʔatʂa-ndu-jə.” T4:132
 now 1PLINNM two separate-C/R-DES
“Now we two are going to separate from each other.”

In (206) is an example of the reciprocal marker suffixed to a medial verb rather than a final verb.

- (206) niə tʂa əʔu-ndu-sə tʂiauruŋ-la maŋ ga olu-wo. T5:65
 one while beat-C/R-DL head-PL all smash become-PRF
After beating each other for a while, [their] heads all became smashed.

5.3.2.1.3 Mood

The mood markers in Santa are the desiderative suffix -jə and the imperative mood which is unmarked. Mood is found only on non-finite verb forms and almost entirely in quoted or reported speech. As shown in Table 5.2 and Table 5.3 above, mood markers follow the causative and collective/reciprocal markers.⁶⁰

5.3.2.1.3.1 Desiderative -jə

The desiderative mood marker in Santa is -jə. The desiderative mood is used to indicate an intention, willingness, or desire on the part of the participant to carry out a specific action in the future. All events described in the desiderative mood are irrealis. If the verb is medial, switch-event markers may follow.⁶¹ If the verb is final, no other suffixes may follow the desiderative suffix.

⁶⁰ The indicative mood is not marked in Santa. If a verb is not in the imperative or the desiderative mood, it can be considered to be indicative.

⁶¹ At this time, I have only encountered the sequential switch-event marked =dəna and the integrative switch-event marker -Ø following the desiderative.

In the example below, both the medial verb bəliəjədə ‘will carry on one’s back’ and the final verb jəwujə ‘will walk’ are in the desiderative mood. This example is illustrative of another point, that commonly both a medial verb and a final verb are in the desiderative mood in the same sentence.

(207) “bi tʃi-ni bəliə-jə=də bau-dzi jəwu-jə.” T6:026

1SGNM 2SG-AC carry.on.back-DES=DQ go.down-SS walk-DES

“I intend to carry you on my back and then I intend to go down [into the river] walking.”

The distribution of the desiderative markers in this example is enlightening as well. This sentence consists of two future events. The first verb bəliəjədə ‘to carry on the back’ is marked for the desiderative mood and ends with a switch-event marker =də ‘DQ’ indicating that this is end of an event and that the following clause is a different event that will follow sequentially. So the first event is, ‘I intend to carry you on my back’. The next verb, bəudzi ‘to go down’ is marked with a switch-event marker -dzi ‘SS’ which indicates that the following clause is part of the same event and that it is simultaneous with the -dzi marked clause. The following clause contains the single verb jəwujə ‘go, walk’, which is also marked for the desiderative mood. So the second event is, ‘I intend to go down walking’. Thus it appears that the scope of the desiderative marker -jə is the event, even though it may consist of more than one clause. I have no counter-examples in my database of more than one desiderative mood marker occurring within a single event that is realized as more than one verb.

Another example is given below which consists of multiple events.

(208) “bi ətʃi=dənə hə-ni 'aɡili-ni niə udzə-jə=dənə irə-jə.” F07:22

1SGNM go=DQ 3SG-GN wisdom-AC one see-DES=DQ come-DES

“After I go, [I] intend to see a bit of his wisdom and then I intend to come [back].”

In this case, the first verb ətsidənə ‘go’ is not marked in the desiderative mood, but it is marked with =dənə ‘DQ’ indicating that the following clause is a different event. The next verb is udzəjədənə ‘see’ which is also marked with =dənə ‘DQ’ indicating that the following clause is a different event. In addition to this, it is in the desiderative mood as well. The next verb irəjə ‘come’ is also in the desiderative mood. So this sentence consists of three events, of which the last two — ‘I intend to see a bit of his wisdom’ and ‘I intend to come back’ — are both in the desiderative mood.

For a detailed discussion of switch-event markers and events, see section 8.3 in Chapter 8.

In (209) below is an example of the desiderative mood following the causative marker. In (205) above, in the previous section, is an example of the desiderative following the reciprocal marker.

- (209) “bi tʃi-ni hə gudəu-də bau-ɣa-jə.” A2:090
 1SGNM 2SG-AC that well-LC go.down-CS-DES
“I intend to let you go down into that well.”

Of the 59 examples of the desiderative in my database, 57 cases or 97% occur in quoted or reported speech.

5.3.2.1.3.2 Imperative

The imperative mood in Santa is unmarked. However, there is no problem identifying when the imperative mood is used. This is because the verb in the imperative mood is a command issued to another referent. In addition, although the verb is non-finite, it is always final. That means no other suffixes may follow the imperative mood. The imperative mood is mutually exclusive with the desiderative mood, but causative and collective/reciprocal marking may be present as in the example below.

- (210) “mi-ni ciaŋdzi-ni miəngu-ni bu godziə-ɣa-ndu-Ø.” A1:119
 1SG-GN chest-AS silver-AC NEG.IMPR move-CS-C/R-IMPR
“Do not move my chest of silver.”

In (210), both the causative and collective/reciprocal markers are present. The imperative and desiderative moods also have a unique negative marker which is bu. For more on negation see section 5.3.2.2.

In Santa the second person pronoun addressee in an imperative is often expressed. My data suggest that the second person pronoun appears in 60% of the imperatives. The example below shows two instances of the second person singular pronoun tsi occurring with verbs in the imperative mood.

- (211) “aija! tsi sau-Ø. bi 'agili-nə ənə udu giə-də-nə
 aiya 2SGNM sit-IMPR 1SGNM wisdom-RP this day house-LC-RP

dziə=dənə irədziwo. tsi niə sau-Ø.” F07:30-2
 fetch=DQ come+PROG 2SGNM one sit-IMPR

Aiya! You sit. Today I will go to my house and fetch my wisdom, and come back. You sit a a bit.

However, no subject need appear with the verb. In (212) mutuŋ ‘tree’, which is repeated, is functioning as a vocative, but it is not the subject of the imperative verb which is also repeated.

- (212) “mutuŋ, mutuŋ! undu-da-Ø, undu-da-Ø!” T2:100-1
 tree tree become.tall-VAS-IMPR become.tall-VAS-IMPR
“Tree, tree! Grow tall, grow tall!”

Verbs in the imperative mood may also occur in clause chains. In (213), the verbs udurudənə ‘lead’, udzəɣələ ‘cause to see’ and jəwu ‘go, walk’ are all

non-finite verb forms, but jawu ‘go, walk’ is a final verb while the others are all medial.⁶²

- (213) “tʃi mi-ni uduru=dənə niə udzə-ɣa-lə jawu-Ø!” F08:43
 2SGNM 1SG-AC lead=DQ one see-CS-SP go-IMPR
After you lead me [there], take me to go see!

As mentioned above, no suffixes may be affixed to the verb in the imperative mood other than the causative and collective/reciprocal markers. But utterance-final particles of different sorts commonly occur following the verb in the imperative mood. In (214), sa follows the verb kiəliə ‘tell, say’ which is in the imperative mood. The function of sa here is apparently to lessen the force of the command so that the effect is more of an invitation rather than a command.

- (214) “dziraŋgəi aɣa, tʃi gudzin niə kiəliə-Ø sa.” A2:031
 wolf brother 2SGNM story one say-IMPR PRT
“Brother wolf, you tell a story for a bit.”

5.3.2.1.4 Switch-event markers

The switch-event markers -sə, =dənə, -dzi, +sənu, and -təla are attached to non-finite medial verb forms that may be marked with the causative and collective reciprocal markers and/or the desiderative mood. An in-depth study of these markers and their function is given in section 8.3 in Chapter 8.

5.3.2.1.5 Aspect

According to Chung and Timberlake, ‘Aspect characterizes the relationship of a predicate to the time interval over which it occurs. This definition is intended to include two distinct types of relationship. First, change.

⁶² My impression is that the imperative mood has scope over all verbs within the same event. Since the verb udurudənə ‘to lead’ is a different event (see section 8.3), the imperative does not have scope over it. The translation reflects this.

Predicates describe states, situations, properties, and so on, that can either remain constant or else change over time. ... Second, ... an event is composed of a predicate and some time interval selected by the speaker ... (Chung and Timberlake 1985: 213-4).'

In Santa, aspect is morphologically expressed on finite verb forms as suffixes.

Aspect in Santa is of three types: perfective, imperfective, and progressive. The perfective aspect characterizes a completed action that has a definite endpoint. The imperfective aspect characterizes an uncompleted action that may or may not have commenced yet. The progressive aspect characterizes an ongoing event relative to a specific event frame. The progressive and imperfective aspects differ from the perfective in that they may have a different deitic center. In other words, rather than having an absolute reference point, the reference point may be relative to the time of utterance.

In addition to these considerations, the perfective aspect is limited to realis events. The imperfective aspect marker is used for irrealis events. In this way, the perfective aspect resembles past tense, and indeed Santa may be in the process of developing a tense system. Another point to support this is that the use of the progressive often resembles a present tense rather than a progressive. With this said, I will still make reference to these distinctions as aspect, not tense.

The aspect system in Santa deserves further investigation. Compared to other Mongolic languages, its categories are reduced and Santa has lost evidentiality as well, a feature found in Baonan (Charles N. Li, personal communication) and Monguor (Keith Slater, personal communication) and other Mongolic languages.

5.3.2.1.5.1 Perfective aspect -wo

The perfective aspect marker in Santa is -wo. The perfective aspect, as described above, characterizes a completed action that has a definite endpoint. Some examples are given below.

(215) bi tʃaŋguŋ si nian sau-wo. N2:018

1SGNM hired.farm.laborer four year serve-PRF

I served as a hired farm laborer for four years.

(216) quəitʃi udu=ni ənə niənəigia ənə kuŋ-də maŋ kiəliə-wo. T4:052

next day=TM this old.woman this person-DT all tell-PRF

The next day this old woman told all to this person.

(217) iŋgia-sə ənə dʒaŋgəi pəsə qudʒa-ni otsira-wo. F06:53

and.so-DL this wolf still sheep-AC meet-PRF

And so this wolf met the sheep next.

In each of the examples above, the verb is in the perfective aspect, indicating that the action is viewed as completed and that there is a definite endpoint. Only realis events may be marked by the perfective aspect.

5.3.2.1.5.2 Imperfective aspect =nə

The imperfective aspect marker in Santa is =nə. The imperfective aspect, as described above, characterizes an uncompleted action that may or may not have commenced yet. Some examples of the imperfective aspect are given below.

(218) “bi tʃi-ni bari-dʒi fuja-sə dʒiauliədʒi=dənə idʒiə=nə.” F06:47

1SGNM 2SG-AC take-SS tie-DL hang.up=DQ eat=IMP

“After I catch and tie you up, I will hang you up, and then I will eat you.”

(219) tʃatɕian quko ixəu, dʒiu dʒəŋʃi 'məhəri quko=nə. MC:047-8

tea.money give after, then formally betrothal.gifts give=IMP

After [he] gives the tea money (engagement money), then the betrothal gifts will be given.

- (220) fugiə otçin-ni=ni dadziə giə=nə. T2:002
 big daughter-AC=GN big.sister call=IMP
Her eldest daughter is called 'big sister'.

In (218), the action of 'eating' has not yet occurred. In (219), the narrator is describing the wedding customs of the Santa. He is thus describing a hypothetical situation, even though it often occurs, but he is not describing a specific action that has taken place. In (220), the fact that the eldest daughter is called dadziə 'big sister' is an uncompleted action that is ongoing.

In example (221), the narrator is describing a situation that is completed with respect to the time of utterance. However, the use of the imperfective here is relative to the time of utterance, not absolute. So the use of the imperfective in this case communicates that at the time of the described event, that it is an action that is not yet completed.

- (221) ban-jə-də=ni kidziə=nə, turgalan bosi=nə. N2:056-7
 half-night-LC=TM sleep=IMP rooster.crowing get.up=IMP
I sleep half the night and get up when the rooster crows.

The imperfective aspect is often used with verbs of saying as in the example below. My impression is that when the imperfective aspect is used in this way, the narrator wishes to emphasize the uncompleted nature of the verb of saying. The effect of this is to frame the story in the narrative present. I have tried to reflect this with the gloss, 'And so the cat is saying, ...'.

- (222) ingiə-sə mauə kiəliə=nə, A2:037
 and.so-DL cat say=IMP

"hə bajan kuŋ-ni wəidziən-də niə qara mutuŋ wo." A2:038
 that rich person-GN door-LC one black tree EXST
And so the cat is saying, "At that rich person's door, there is a black tree."

The distribution of the perfective and imperfective aspects in narrative discourse is largely determined by the choice of narrative topic. There are three fairly long narratives in my database: N1 bidziənni fənsu ɕiguən ‘Our customs and habits’; N2 godziəni wəiliəni kiəliəjə ‘I will speak of my own experience’; and MC ‘Marriage customs’. It is not surprising that N2 is almost entirely in the perfective aspect because the narrator is talking about his own personal experiences growing up before and after the Chinese liberation. On the other hand, N1 and MC are both descriptions of Santa customs and do not describe specific events that have occurred. Their primary goal is to describe the customs and habits of the Santa as they are and continue to be. Thus, these narratives are almost entirely in the imperfective and progressive aspects. In fact, N1 does not have a single occurrence of the perfective aspect.

5.3.2.1.5.3 Progressive aspect +dziwo

The progressive aspect marker in Santa is +dziwo. The progressive aspect, as described above, characterizes an ongoing event relative to a specific event frame. Some examples are given below.

- (223) niudu kuŋ-la hə tʃuan dziəɾə-sə jawu-dzi dawa+dziwo. M5:19-21
 today person-PL that boat on-AB go-SS cross+PROG
Today, people are going and crossing from that boat.

- (224) tʃigəŋ dziəɾə ɕiaukə dzo+dziwo. N1:057
 ear on earring wear+PROG
[The Santa women] are wearing earrings on the ears.

- (225) kuan-sə tʃusuŋ xosuŋ dzi urusu+dziwo. N2:060
 foot-AB blood pus and flow+PROG
From [my] foot, blood and pus were flowing.

In (223) above, the action of crossing the river is ongoing. Example (224) is similar in that Santa women are still wearing earrings. In (225), however, the

use of the progressive aspect is relative to the event frame. This is because (225) describes a past event that is over now, but within the relative event frame of the utterance, blood and pus were flowing at that time.

In the example below, the progressive aspect is used to show that being unable to run is an ongoing action.

- (226) *ciəni kuru-sə ənə otɕin-la aji-dzi xolu da+dziwo.* T2:057
 night arrive-DL this daughter-PL afraid-SS run unable+PROG
After night arrived, these daughters were so afraid they were unable to run.

In (227), the progressive aspect is used to show that the non-payment of the debt still continues and is ongoing. From the speaker's perspective, no part of the repayment has occurred. Even though the verb is negated, the event is realis. Thus, it is the case that the repayment of the debt did not occur and that the situation is still true at the time of this utterance. For more discussion of this example, see section 5.3.2.2.1 below on the realis negative marker *əsə*.

- (227) *"tɕi-ni laudziga mi-ni dzaŋ-ni dau ori əsə giə+dziwo."* A1:006
 2SG-GN old.man 1SG-GN debt-AC still debt R.NEG pay+PROG
"Your old man still has not repaid my debt."

In (228), as mentioned earlier, it seems that what is being communicated in some uses of the progressive is present tense.

- (228) *ingiə-sə galadzi dajin giə+dziwo.* MP:27
 and.so-DL magpie agree do+PROG
And so the magpie agrees.

At this point, I am not absolutely clear whether the progressive and imperfective aspects are completely differentiated. One possibility is that the focus of the imperfective is the incomplete nature of the described situation, while

the focus of the progressive is that the action continues and is ongoing. This admittedly is a very fine line.

The imperfective and progressive aspects do differ in an important way. The difference is that the progressive aspect must be used to describe actions that have begun, thus realis events. Even in example (227) above, it can be understood that the non-repayment has begun and continues. The imperfective aspect, on the other hand, is the only one that can be used to describe irrealis events or situations, and it is most often used this way. However, it can and often is used to describe realis events as well, as examples (220) and (221) above show.

5.3.2.2 Negation

Negation is expressed in Santa in a number of different ways. The first strategy is to use one of five different negative markers that immediately precede the verb that is being negated. These markers are əsə, uliə, bu, u, and puʃi. The choice of marker is determined by modality (realis or irrealis), mood, and the type of verb being negated. Each of these will be discussed in turn below.

The second strategy is to use a negative verb, either wəi or də. wəi will be discussed below and the auxiliary verb də will be discussed in section 5.3.2.3.1.

5.3.2.2.1 Realis negative marker əsə

The negative marker əsə is used to negate realis events. This means əsə co-occurs with both the perfective and progressive aspects, although it is found primarily in perfective contexts. In (229), the negative marker əsə precedes the finite verb irəwo which is in the perfective aspect.

- (229) *irə səkɪ-sə ənə tauləi əsə irə-wo. F08:26*
 come wait-DL this rabbit R.NEG come-PRF
 After [the tiger] came and waited, this rabbit did not come.

əsə may also precede non-finite verbs as in (230) where it precedes ogidə. The modality is realis.

- (230) fugiə kəwəŋ-də jama əsə oqi=də guala-ji quri-ka-wo. A2:016
big boy-DT anything R.NEG give=DQ two-AC go.out-CS-PRF

After [she] did not give the elder boy anything, she made the two of them leave.

The negative marker əsə may also be found in progressive contexts as in (231). As mentioned above in example (230), the modality here is also realis. The perspective taken by the speaker is that the repayment of the debt did not occur and that the situation is still true at the time of this utterance. The realis negative marker is used here to assert that the non-occurrence of the repayment is a realis event rather than an irrealis event that has not occurred yet. In addition, this example can be understood as a *negative perfect* because the non-completion extends to the time of the utterance. Unfortunately, I do not have enough examples of the realis negative marker being used in progressive contexts to see whether the interpretation is always negative perfect.

- (231) “tʃi-ni laudziga mi-ni dzəŋ-ni dau ori əsə giə+dziwo.” A1:006
2SG-GN old.man 1SG-GN debt-AC still debt R.NEG pay+PROG

“Your old man still has not repaid my debt.”

5.3.2.2.2 Irrealis negative marker uliə

The negative marker uliə is only used in irrealis contexts. This means it co-occurs with the imperfective aspect which must be used to express irrealis events. In (232) and (233) are two examples of uliə preceding finite verbs in the imperfective aspect.

- (232) “hə ənə-ni uliə mədziə=nə.” A2:045
3SGNM this-AC I.NEG know=IMP

“He does not know this.”

(233) *mori mika əndzəxə mika lausa mika 'basi mika dʒaŋgəi mika*
horse meat donkey meat mule mear tiger meat wolf meat

funiəxəŋ mika jə uliə idziə=nə. N1:042
fox meat also I.NEG eat=IMP

Horse meat, donkey meat, mule meat, tiger meat, wolf meat, and fox meat
[we] also do not eat.

In (234) is an example of *uliə* preceding a non-finite verb, but the modality is irrealis.

(234) “*bi uliə irə-tala*
 1SGNM I.NEG come-LMT

kian irə liaudzə ta wəidziən-ni bu niə-Ø.” T2:014
who come no.matter 2SGPL door-AC IMPR.NEG open-IMPR
“As long as I do not come, no matter who comes, do not open the door.”

The irrealis negative marker *uliə* may also precede nominalized verbs as in (235) where it precedes *oqi-wu-sə*.

(235) “*tʃi ətʃi-sə uliə oqi-wu-sə əji=nə.” T5:22*
 2SGNM go-DL I.NEG give-I.NM-AB afraid=IMP
“If you go, I will be afraid from not giving.”

5.3.2.2.3 Imperative/desiderative mood negative marker *bu*

The negative marker *bu* is used to negate verbs in the imperative and desiderative moods. An example of *bu* negating a verb in the imperative mood is given below.

(236) “maʔaʃi tʃi-ni qara dzian musi-sən kuŋ ɕiŋ-la-lə irə-sə
tomorrow 2SG-AC black clothes wear-P.NM person invite-VS-SP come-DL

tʃi bu ɛtsi-Ø.” T6:011

2SGNM IMPR.NEG go-IMPR

“If you are invited by a person who has worn black clothes, do not go!”

Another example of bu negating a verb in the imperative mood is given in (237). In this case the verb is marked with both the causative and collective/reciprocal suffixes.

(237) “mi-ni ɕiaŋdzi-ni miəngu-ni bu godziə-ɣa-ndu-Ø.” A1:119

1SG-GN chest-AS silver-AC IMPR.NEG move-CS-C/R-IMPR

“[You guys] do not move my chest of silver.”

In (238) is an example of bu negating a verb in the desiderative mood. These cases are more rare than the previous type.

(238) “bi tʃi-ni bu idziə-jə.” T6:120

1SGNM 2SG-AC IMPR.NEG eat-DES

“I do not intend to eat you.”

Although bu is phonetically identical to the Chinese imperfective negative marker bù, it is not genetically related. The fact that it is indigenous is shown in the comparative example below which illustrates that bu has lost its vowel length in Santa.

(239) (Kuribayashi 1989:200)

	PROHIBITIVE PARTICLE
Script M.	buu
Mongolian	buu
Dagur	buu
E. Yugur	
Monguor	bii
Baonan	--
Santa	bu

5.3.2.2.4 Negative possessive marker u

The negative marker u precedes the verb wo when it means ‘to have’. For more on the possessive construction with wo see section 8.1.3.4 in Chapter 8. A couple examples of u are given below.

(240) udzə-ʁa-ku oron u wo. N2:118

see-CS-I.NM place PS.NEG have

[We] did not have a place to be seen (by a doctor).

(241) mi-ni idziə-sə tʃi-ni ʃiduŋ dzawa-də niə kuru-ku-ni

1SG-AC eat-DL 2SG-GN tooth crevice-DT one be.enough-I.NM-AC

u wo ma. F08:09

PS.NEG have PRT

If you eat me, your stomach (tooth crevice) will not have enough.

5.3.2.2.5 Negative copula marker puʃi

The negative marker puʃi precedes the Santa copula verb wo when it means ‘to be’. Some examples of puʃi are given below.

(242) “tʃi ʃi mini ana pusi wo.” T2:043
 2SGNM COP.H 1SG-GN mama COP.NEG COP.S
“You are not my mama.”

(243) bi dziaʊsəu pusi wo.⁶³
 1SGNM professor COP.NEG COP.S
I am not a professor.

5.3.2.2.6 Negative verb wəi

The negative verb wəi is used to express the meaning ‘to not have’. It is clear that wəi is a verb because a) it takes aspectual marking as in (244) and (245); b) because it can take non-finite switch-event markers; and c) because it can be nominalized. None of the negative markers that have been previously discussed can take any of this verbal morphology.⁶⁴

(244) “nama-də nudaŋ wəi-wo.” T8:08
 1SG-DT eye not.have-PRF
“I did not have eyes.”

(245) “ma-də jama nançin wəi-wo.” T4:106
 1SG-DT anything difficult not.have-PRF
“I did not have anything difficult.”

In (246), both of the instances of the negative verb wəi are taking the switch-event marker -sə. For more on switch-event markers see section 8.3 in Chapter 8.

⁶³ This example is from my personal notes dated October 4, 1991.

⁶⁴ I am not certain whether wəi ‘to not have’ is related to the u wo ‘not have’ construction discussed in section 5.3.2.2.4. The major distinction between the two is that wəi ‘to not have’ may take finite and non-finite verb morphology while u wo ‘not have’ cannot.

(246) “tʃima-də biəri wəi-sə biəri daŋ-la-jə, otcin wəi-sə
 2SG-DT wife not.have-DL wife serve-VS-DES daughter not.have-DL

otcin daŋ-la-jə.” T2:136-7

daughter serve-VS-DES

“If you do not have a wife, I will serve as your wife. If you do not have a daughter, I will serve as your daughter.”

In (247), the negative verb wəi is nominalized with the imperfective nominalizer -ku.

(247) niə udu-də=ni ənə kəwəŋ wəi-ku-də dzəru-sən niənəigia
 one day-LC=TM this boy not.have-I.NM-LC make.use-P.NM old.woman

ənə biəri-də asa=nə, ... T6:083

this daughter.in.law-DT ask=IMP

One day when this boy having nothing that he had made use of before, the old woman asks the daughter-in-law, ...

5.3.2.3 Auxiliary verbs

Auxiliary verbs immediately follow main verbs which can be marked with the causative or collective/reciprocal markers, but no other morphology may be suffixed to the main verb. The auxiliary verb may take switch-event markers, aspect markers, or be nominalized.

Auxiliary verbs differ from main verbs in that they may not be marked for mood categories. They differ from suffixes in that they are set apart from the main verb intonationally. One of the ways in which this manifests itself, is that the stress of the main verb remains unchanged when it co-occurs with an auxiliary. Another way in which this manifests itself, is that the auxiliary verb may receive stress if a suffix that does not cause the stress to shift is suffixed to it, for example the imperfective suffix =nə. This is illustrated with the auxiliary də ‘to be unable’.

- (248) "iŋgiə-sə tʃi-ni nəntʃin-ni mɑ'ta 'da=nə." F05:08
 and.so-DL 2SG-GN loving.kindness-AC forget unable=IMP
"And so your loving kindness I will be unable to forget."

If da 'to be unable' were a suffix, the last syllable of the verb 'mata' 'forget' would not receive stress. The stress would fall on the syllable da alone.
 I will discuss da 'to be unable' and giə 'to do' below.

5.3.2.3.1 Auxiliary verb da

The negative auxiliary verb da in Santa means 'to be unable to X' where 'X' is the meaning of the main verb. In (249) da follows the main verb quuri 'to go out'. The auxiliary verb is marked for the progressive aspect.

- (249) "bi nokien-sə quuri da+dziwo." T4:107
 1SGNM hole-AB go.out unable+PROG
"I am unable to go out of the hole."

In (250) is an example of da following the main verb badzila 'to bear' and taking the switch-event marker =dənə.

- (250) mausuməkətʃi xo kuru-dzi badzila da=dənə giəxun-ni
 witch anger reach-SS bear unable=DQ rooster-AC

idziə-wo mɑ! T2:113

eat-PRF PRT

The witch became so angry she was unable to bear it and ate the rooster!

In (251), the auxiliary verb da is also marked with the switch-event marker =dənə, but the main verb in this case is marker with the causative suffix.

(251) 'basi jama guailu-xa da=dənə udzə bai-wo. F05:17

tiger anything change-CS unable=DQ look stand-PRF

After the tiger was unable to make anything change, he stood and looked.

In the example below, da is nominalized with the progressive nominalizer -tsən.

(252) nəngəu-də kuru da-tsən uliə giə=nə. N1:028

financial.resources-LC be.enough unable-PR.NM I.NEG do=IMP

The one who does not have enough financial resources will not do it.

Another example of da being nominalized is shown in (253) where the imperfective nominalizer -ku is used.

(253) “ənə udu niə moxəi bidzian-ni ɕi-ji-dzi badzila da-ku-də

this day one snake 1PLEX-AC pillage-BVS-SS bear unable-I.NM-LC

niə kuŋ irə=dənə moxəi-ni əkɯ ala-wo.” T4:090

one person come=DQ snake-AC beat kill-PRF

Today when a snake was pillaging us so that we were unable to bear it, a person came and beat and killed the snake.

5.3.2.3.2 Auxiliary verb giə

The verb giə only functions as an auxiliary when it is used in conjunction with disyllabic loans from Chinese. Otherwise, it occurs independently as a main verb. In (254) giə ‘to do’ follows the borrowed Chinese verb dajin ‘to agree’, from Chinese dāying, and is marked for the progressive aspect.

(254) ingiə-sə galadzi dajin giə+dziwo. MP:27

and.so-DL magpie agree do+PROG

And so the magpie agrees.

In (255) giə ‘to do’ follows the borrowed Chinese verb boɕiə, ‘to exploit’ from Chinese bōxuē, and takes the switch-event marker dzi ‘SS’.⁶⁵

(255) janjin ʃi gomindaŋ fandunpai xo dzidzu-la
 reason COP.H Nationalist.Party reactionaries and landlord-PL

japai boɕiə giə-dzi dziaxuai-ra-ka-san wo. N2:034
 repress exploit do-SS poor-VAS-CS-P.NM COP.S

The reason is that the Nationalist Party reactionaries and the landlords have been repressing and exploiting [us] causing us to be the poor ones.

5.3.3 The intensifier suffix -kaŋ and the comparative degree in adjectives

The comparative degree in adjectives is often marked with the intensifier suffix -kaŋ. This is discussed in Chapter 7 in section 7.2.4.7.

5.3.4 The positional associative marker -du

The positional associative marker -du ‘P.AS’ occurs after postpositional phrases and time/place words. This marker is discussed in Chapter 7 in section 7.5.2.2.1.

⁶⁵ An interesting question that I cannot answer at this point is whether giə ‘to do’ has scope over the previous verb as well, japai ‘to repress, to oppress’ from Chinese yāpò, which is a disyllabic loan as well.

Chapter 6

The Lexicon

6. Introduction

In this chapter, I will look at the Santa lexicon. The Santa lexicon is an interesting mix of indigenous words of Mongolic origin and large numbers of nouns and verbs borrowed from Linxia Hui Chinese. In addition, there are numerous words borrowed from Turkic, Persian and Arabic.

First, I will take a look at Bu He's (1983) *Dongxiang Language Dictionary*. Next I will spend some time discussing and looking at the lexical items borrowed from the major source languages: Chinese, Turkic, Persian, and Arabic.

The Santa lexicon is a reflection of Santa's long and varied history. The Turkic loans are presumably remnants of the Santa nationality's ethnic roots in the Turkic peoples of Central Asia (see Chapter 2), while the Persian and Arabic loans echo the Santa peoples' commitment to Islam. The large number of Hui Chinese loans are an indication of the close cultural and economic ties between the Santa and the Hui that have lasted for hundreds of years.

6.1 Bu He's (1983) *Dongxiang Language Dictionary*

Bu He's (1983) Dongxiangyu Cihui, *Dongxiang Language Dictionary* (DLD henceforth), published in the Mongolian Language and Dialect Series in 1983 by the University of Inner Mongolia in Huhehot in the People's Republic of China, is the most complete compilation of Santa words to date with over 4500 entries. For each entry in the DLD, the part of speech and the source language, if known, are given. Although I disagree with a number of the categorizations in the DLD, especially in regard to some terms used for the less frequent parts of speech, my effort to remedy this situation has been minimal in the tabulation in Table 6.1.

	Total	Noun	Verb	Adj	Nu	Pro	Adv	On	Ph	M	T/P	I	AV	Oth
Santa	1771	695	728	144	56	66	10	6	18	6	16	3	8	15
Santa/Hui Chinese	161	93	54	2	9	1			2					
Santa/Unknown	59	18	21	3	8	3			6					
Santa/Turkic	10	9								1				
Santa/Other	9	5	3						1					
Hui Chinese	1623	1092	337	100	34	3	27	5		18		2	2	3
Chinese/Santa	271	144	117	4	2				4					
Chinese/Unknown	11	3	5	1				1	1					
Chinese/Turkic	10	10												
Chinese/Secret History	9		9											
Chinese/Other	2	1	1											
Unknown Source	346	135	94	25		15	21	36		4		12	2	2
Unknown/Santa	85	39	35	4		2	1		3					1
Unknown/Chinese	14	9	4	1										
Unknown/Other	5	3	2											
Turkic	29	24	3	2										
Turkic/Santa	13	6	7											
Turkic/Other	6	2	4											
Arabic	23	22		1										
Arabic/Other	9	2	5						1					1
Secret History	15	6	3			5					1			
Secret History/Other	5	1				4								
Persian	12	12												
Persian/Other	9	4	4						1					
Huayi Yiyu	9	7	2											
Huayi Yiyu/Other	3	1	2											
Tibetan	2	2												
Tibetan/Other	1		1											
Total	4522	2345	1441	287	109	99	59	48	37	29	17	17	12	22

Table 6.1: Lexical items in Bu (1983) by part of speech and source language
(Includes entries of mixed source)

Table 6.1 is a tabulation of the 4522 entries in Bu (1983) by part of speech and source language.^{66, 67}

Words of unknown origin listed in Table 6.1 above are only listed as such because the source language has not yet been identified. In most cases, these words are probably either Mongolic or Chinese origin, but no clear antecedent is yet known.

Table 6.1 includes all of the entries in the DLD. Many of these entries have mixed sources. In other words, one entry may have as its source two languages. A few of these entries and their sources are given in (1) through (4).

(1)	<u>əndəxi taʃi</u>	'cobblestone'	Santa/Turkic
(2)	<u>liəŋxua tʃidzə</u>	'lotus flower'	Chinese/Santa
(3)	<u>mila usu</u>	'stream'	Unknown/Santa
(4)	<u>maudzi anda</u>	'to dislocate'	Chinese/Santa

In (1) the noun əndəxi taʃi 'cobblestone' is literally 'egg rock'. taʃi has been borrowed from Turkic and is the only word in Santa for 'rock' or 'stone'. In (2), the noun liəŋxua tʃidzə 'lotus flower' is literally 'lotus.flower flower', so that the semantic content of xua 'flower' in Chinese has been repeated in Santa with tʃidzə. In (3), the noun mila usu 'stream' is literally 'small water'. The source of mila is unknown. And in (4), the verb maudzi anda 'to dislocate' is literally 'joint to.come.loose'.

One of the most striking facts about Table 6.1 is the number of borrowed nouns from Hui Chinese. There are 1352 Hui Chinese nouns (from mixed sources) out of 2345 total nouns from mixed sources. That means 58% of all

⁶⁶ Abbreviations: Adj = Adjective; Nu = Numeral; Pro = Pronoun; Adv = Adverb; On = Onomatopoeia; Ph = Phrase; M = Measure Word; T/P = Time/Place Word; I = Interjection; AV = Auxiliary Verb; Oth = Other, includes Grammatical Particle, Conjunction, Postpositional Phrase, Suffixal, Linking Verb.

⁶⁷ 'Other' in the source language column refers to combinations with one or more languages that were low in frequency.

Santa nouns are borrowed from Chinese. If we look at only nouns from unmixed sources, (see Table 6.2), 1092 of 1995 nouns are borrowed from Chinese, or 55%.

These results are likely biased on three accounts. First, researchers working on this project (who were for the most part not native Santa researchers) may have had difficulty eliciting larger numbers of indigenous Santa lexical items due to their lack of understanding of the Santa culture. An analogous example (Charles N. Li, personal communication) is found in Baonan Mongolian which has numerous words for different types of horses. If one did not understand this aspect of their culture, one might overlook this and simply ask what was the Baonan word for ‘horse’ and fail to elicit a host of other words describing different types of horses.

Secondly, a large number of words have been elicited that are not an inherent part of Santa society and culture. Since a large portion of the Santa population is bilingual, if a language consultant were asked what the Santa word was for something that is not a part of his culture, he is likely to substitute the respective Hui Chinese word in response.

Thirdly, there was political pressure on scholars in China during the sixties and seventies to include political terminologies in the lexicon. These terms are almost without exception loans from Chinese. The nouns listed in (5) provide a glimpse of such loans:

(5)	dan	‘political party’
	danjan	‘party member’
	giəmin	‘revolution’
	gunʃə	‘commune’
	dzuçi	‘Chairman’
	fəŋgiəmin	‘counter-revolutionary’

For more discussion concerning Bu (1983) and Hui loans in Santa, see section 6.2 and Field (1991).⁶⁸

There are a few entries for which cognates can be traced back as far as the *Secret History of the Mongols*, a pre-classical Middle-Mongolian literary text ‘written in 1240 in a Mongolian dialect and later transcribed with Chinese characters’ (Poppe 1974:2). Some examples are given in (6).

(6)	əɣu	‘to hit, to beat, to strike’
	xolu	‘to run’
	hə	‘he, she’
	tʃinaə	‘day after tomorrow’
	abi	‘father’s elder brother, uncle’
	çiro	‘base, bottom’
	çira	‘below, under’

In addition, there are a few entries for which cognates can be traced back to the *Hua-I i-yü*, a Sino-Mongolic glossary which dates back to 1389 and contains Mongolian texts with Chinese transcription (Poppe 1965:22). Some examples are given in (7).

(7)	bəŋkə	‘flea’
	tuma	‘radish’
	taɣi	‘baldhead’
	funi	‘haze, mist, smoke’
	sugiə	‘to curse, to revile’

The lexical items in (6) and (7) above are of Mongolic origin and as such should be considered cognates, not borrowings.

⁶⁸ It must be admitted however that many of the conclusions I reached in Field (1991) I no longer hold.

6.2 Hui Chinese Loans

In this section I will discuss Hui Chinese loanwords in the Santa lexicon and in more detail borrowed nouns, verbs, and adverbs.

According to the DLD, 1623 out of 3830 entries from unmixed sources, or 42% of the Santa lexicon consists of Hui loans.⁶⁹ Table 6.2 is a tabulation of entries by part of speech and unmixed source language according to the DLD.⁷⁰

	Total	Noun	Verb	Adj	Nu	Pro	Adv	On	M	Ph	I	T/P	AV	Oth
Santa	1771	695	728	144	56	66	10	6	6	18	3	16	8	15
Chinese	1623	1092	337	100	34	3	27	5	18		2		2	3
Unknown Source	346	135	94	25		15	21	36	4		12		2	2
Turkic	29	24	3	2										
Arabic	23	22		1										
Secret History	15	6	3			5						1		
Persian	12	12												
Huayi Yiyu	9	7	2											
Tibetan	2	2												
Total	3830	1995	1167	272	90	89	58	47	28	18	17	16	12	20

Table 6.2: Lexical items in Bu (1983) by part of speech and source language
(Does not includes entries from mixed sources)

Here are a few minor points about other parts of speech that will not be discussed in this chapter. Of the 272 adjectives from unmixed sources, 100 or 37% are borrowed from Chinese. Adjectives will be discussed in detail in section 7.2.4. All numerals above ten are borrowed from Hui Chinese. There is an indigenous word for ‘twenty’ *qorun* but it is archaic and rarely used. For more on numerals see section 7.2.2. 18 out 28 or 64% of measure words are also borrowed

⁶⁹ Looking at all entries from mixed sources, 2101 of 4522 entries, or 46% of the Santa lexicon consists of Hui loans.

⁷⁰ See footnote 66 for list of abbreviations.

from Hui Chinese. However, these should not be confused with Chinese classifiers which are not included in Table 6.2 but are occasionally borrowed. For more on measure words and classifiers see section 7.2.3.

Borrowed nouns, verbs, and adverbs will be discussed in more detail below.

6.2.1 Nouns

Table 6.2 shows that 1092 out of 1995 entries from unmixed sources or 55% of the nouns in the Santa lexicon are Hui loans. As discussed in section 6.1 above, elicitation methods probably have biased these results. Although it is clear that Santa has borrowed nouns extensively from Chinese, it is also clear that 55% is an inflated figure.

Borrowed nouns may function or occupy the same slot as Santa nouns. Special suffixes are not required to indicate that they are borrowed. As we will see in the next section, such suffixes are required for verbs.

- | | | |
|-----|----------|--|
| (8) | ɕiaudzɔŋ | ‘school headmaster’ (from Chinese <u>xiàozhǎng</u>) |
| | tʂədzi | ‘car, vehicle’ (from Chinese <u>chēdī</u>) |
| | banfa | ‘way, method’ (from Chinese <u>bànfǎ</u>) |

In addition, borrowed nouns take case endings just like indigenous nouns.

- (9) ənə 'basi ʂidzi-də asɑ+dʒiwo ... F07:05
 this tiger lion-DT ask+PROG
The tiger asked the lion ...

In (9) above, ʂidzi is a borrowed from Chinese shīzi ‘lion’. The dative case suffix -də is added directly to the borrowed noun. All other noun morphology is suffixed directly to borrowed nouns as well.

6.2.2 Verbs

337 out of 1167 entries from unmixed sources or 29% of the verbs in the Santa lexicon are borrowed.⁷¹ Borrowed verbs differ from borrowed nouns in that they require a suffix or an auxiliary verb. Monosyllabic loans ending in a vowel take the BVS suffix (Borrowed Verb Suffix) -ji as shown in example (10).

- | | | |
|------|----------|--|
| (10) | dɛiau-ji | ‘to give up, to deliver’ (from Chinese <u>jǐāo</u>) |
| | la-ji | ‘to pull’ (from Chinese <u>lā</u>) |
| | sai-ji | ‘to cut out’ (from Chinese <u>cái</u>) |

Monosyllabic loans ending with a nasal take the BVS suffix -dzi as shown in example (11).

- | | | |
|------|-----------|---|
| (11) | dzuɒŋ-dzi | ‘to pretend, to make believe’ (from Chinese <u>zhuāng</u>) |
| | pəŋ-dzi | ‘to carry in both hands’ (from Chinese <u>pěng</u>) |
| | jin-dzi | ‘to print’ (from Chinese <u>yìn</u>) |

In addition to the BVS suffixes -ji and -dzi, there are a number of other BVS suffixes which are less common that are found on Chinese borrowed verbs. For a discussion of these see section 5.2.5.1.4 above. An example of one of these is given in (12) where the BVS -da is suffixed to dzi ‘to stick out’ (from Chinese zhī).

- | | | | | |
|------|--|-----------|---------------------------|---------|
| (12) | sadzɿɿ | ɡudzuŋ-nə | <u>dzi-da-ka+sənu</u> ... | MP:43-4 |
| | magpie | neck-RP | stick.out-BVS-CS+DM | |
| | <i>As soon as the magpie had stuck his neck out (with pride) ...</i> | | | |

Bisyllabic loans require the verb giə ‘do’ to them. The aspectual morphology is suffixed to the verb giə. Some examples from the DLD are given in (13).

⁷¹ Looking at all verb entries from mixed sources, 527 of 1441 entries, or 37% of the Santa verbal lexicon consists of Hui loans.

- | | | |
|------|-------------|--|
| (13) | dajin giə | ‘to agree’ (from Chinese <u>dāying</u>) |
| | fanduəi giə | ‘to oppose’ (from Chinese <u>fānduì</u>) |
| | şaŋlian giə | ‘to discuss’ (from Chinese <u>shāngliang</u>) |

Indigenous Santa verbs do not take the BVS suffixes -ji and -dzi. However, giə ‘do’, does occur with indigenous Santa words and appears to be derivational in character, deriving verbs from nouns as in (14). It can also be used to derive verbs from Chinese nouns.

- | | | |
|------|---|------------------|
| (14) | budaŋ giə | ‘to make dinner’ |
| | (from Santa <u>budaŋ</u> ‘cooked rice, meal’) | |

Using a verb meaning ‘do’ to derive verbs from borrowed nouns is a common phenomenon and is attested in a number of typologically diverse languages.

Aspectual morphology follows the BVS suffix or the auxiliary verb as can be seen in (15) and (16).

- | | | | | | |
|------|---|--------------|-----------|---------------|---------|
| (15) | dzişi | tşa-tşa=dzi | dziəuli-Ø | tçi-ji-wo. | MP:67-8 |
| | only | ONOM-ONOM=DE | jump-SN | begin-BVS-PRF | |
| | <i>[He] only began to jump around chattering like a magpie.</i> | | | | |

- | | | | | | |
|------|------------------------------------|----------|-------|------------|-------|
| (16) | ingiə-sə | galadzi | dajin | giə+dziwo. | MP:27 |
| | and.so-DL | pheasant | agree | do+PROG | |
| | <i>And so the pheasant agrees.</i> | | | | |

6.2.3 Adverbs

Of the 58 adverbs in the DLD, 27 or 47% are borrowed from Chinese. My discourse data reveals that adverbs are one of the most commonly borrowed grammatical categories which occur in natural language use. Example (17) has an adverb, dzişi ‘only’ sentence-initially (from Chinese zhǐshì). The subject is not mentioned in this case because it is understood from the previous context.

- (17) dzisi tʃa-tʃa=dʒi dʒiauli-Ø tci-ji-wo. MP:67-8
 only ONOM-ONOM=DE jump-SN begin-BVS-PRF
[He] only began to jump around chattering like a magpie.

In (18), there are two borrowed adverbs, dzən ‘in the process of’ (from Chinese zhèng) which lexically marks the progressive aspect and ixəu ‘after’ (from Chinese yǐhòu) which marks the clause that is preceding it as a temporal adverbial. For more on adverbs see section 8.2.2.1. For more on ixəu ‘after’ see section 8.1.4.2.

- (18) bi sɪda dzən jawu-dʒi ətʃi ixəu,
 1SGNM close in.the.process walk-SS go after
 ənə kəwən-ni fu-ji-Ø bosɪ-Ø ɪrə-ka-wo. BH:28-9
 this boy-AC help-BVS-SN get.up-SN come-CS-PRF
After walking up closer, I helped the boy to get up.

6.3 Words of Turkic Origin in Santa

I have identified the following Turkic loans, listed in Table 6.3, in the *Dongxiang Language Dictionary* (DLD). There are also a number of loans of Turkic origin with mixed sources that are not listed in Table 6.3.

Most of the items in Table 6.3 are not associated with Islam, as the Persian and Arabic loans are that we will investigate in sections 6.4 and 6.5. It should be noted that number of these words are core vocabulary items, like ada ‘papa’, ana ‘mama’, baɐ ‘money’, dan ‘wall’, giədʒiə ‘paper’, laʃiɐa ‘noodles’, sidzakən ‘rat’, taʃi ‘stone’, and uɕin ‘face’. This finding is noteworthy because generally, borrowed lexical items tend not to be core vocabulary. This is because these items are already present in the L1 vocabulary, in this case Santa, and thus do not need

to be borrowed from the L2 source language. The question that arises then is whether these lexical items are borrowings at all?⁷²

From my viewpoint, at least some of these lexical items are more likely *retentions* from an earlier time period when some of the ancestors of the Santa spoke a Turkic language, and thus are not borrowings. In other words, when the Santa population shifted to Mongolic in the late 13th or early 14th century, these items remained in the Santa vocabulary and were never lost. Below I will show some historical/comparative evidence that this scenario is at least a possibility. Table 6.3 is a list of Turkic loanwords in Santa.

⁷² Of course, core vocabulary items can be borrowed, so the presence of these items alone is insufficient evidence to show that these are retentions. But see discussion below.

Santa	Gloss	Source Language
ada	papa	Turkic
ana	mama	Turkic
anəi	mother	Turkic
badza	city, market	Turkic
†baə	money	Turkic
†baɤa	frog	Turkic
daŋ	wall	Turkic
†daŋga	dirt clods	Turkic
dzaŋga	walnut	Turkic
†giədziə	paper	Turkic
†gəgiə	to hiccup; to belch, to burp	Turkic
kiəntʃi	hemp	Turkic
kuri	utensil used to measure rice	Turkic
†laʃiɤa	noodles	Turkic
orəu	apricot	Turkic
sidaka	feast	Turkic
sidzaxaŋ	rat	Turkic
†ʃidzi	scale, steelyard	Turkic
taʃi	stone, rock	Turkic
tomo	mallet, hammer	Turkic
tʃugu	chopsticks	Turkic
†tʃulu	gum (in the eyes)	Turkic
tumaŋ	fog	Turkic
†uçin	face, appearance	Turkic

Table 6.3: Words of Turkic Origin in the Dongxiang Language Dictionary⁷³

⁷³ Words preceded by “†” were not originally identified as Turkic Loans in the DLD (Bu 1983).

Table 6.4 on the following pages compares the borrowed Turkic words in Santa with the same words in the Turkic languages of China. Table 6.4 is based on data drawn from *Zhongguo Tujue Yuzu Yuyan Cihui Ji Turkic Languages of China Dictionary* (1990), henceforth TLCD. This dictionary gives parallel listings for each entry from Uighur, Khazakh, Kirghiz, Uzbek, Tatar, Tuva, Salar, and Western Yugur, all Turkic languages which are spoken in China.⁷⁴ Uighur is spoken throughout Xinjiang province in northwest China and has over six million speakers. It is by far the largest Turkic language in China. Khazakh is spoken in northern Xinjiang province near the Russian border and has over one million speakers. Kirghiz is spoken in extreme southwestern Xinjiang province and has over 100,000 speakers. Uzbek is spoken in western Xinjiang province in scattered areas and has only 3000 speakers or so in China. Tatar is spoken in northern Xinjiang province and has only 1000 speakers or so in China. Tuva is also spoken in northern Xinjiang province and has only 2000 speakers or so in China. Salar is spoken in the Gansu/Qinghai border region near Linxia, very close to where Santa is spoken. There are around 55,000 speakers. Western Yugur is spoken in northwestern Gansu province with around only 4600 speakers. Many of these languages that border Russia and the former Soviet Republics have speakers in these countries as well. The only two languages that don't have speakers in other countries are Salar and Western Yugur. Population estimates are for China only (TLCD 1990:3).

The first column in Table 6.4 is the Santa loanword. (Please refer to Table 6.3 for the gloss.) The second column is the corresponding Uighur word as found in the TLCD. It should be noted that for each Turkic loanword identified as such in the DLD, a Uighur source word is given. However, I am very doubtful that Uighur is the primary source language for these loans, as will be discussed below. There are some Turkic loans that apparently have no cognates in the modern Turkic languages of China. These are *baæ* 'money', *ɗaŋga* 'dirt clods', *laʃiɣa*

⁷⁴ No attempt has been made in Table 6.4 to exclude words in the TLCD that are obviously not cognate.

‘noodles’, sidaxa ‘feast given in honor of a departed friend or ancestor for the sake of charity’, sidzi ‘scale, steelyard’, and tsulu ‘gum (in the eyes)’. For both danGa ‘dirt clods’ and sidaxa ‘feast’, Uighur sources are given in the DLD and *Dongxiang and Mongolian* (Bu 1986) respectively, but no independent confirmation of these were found in the TLCD.

At this point I want to briefly discuss the correspondences between the Santa loanwords and cognates in the Turkic languages of China. ada ‘papa’ is similar to Uighur, Khazakh, Kirghiz, and Tatar. The only difference is that the medial stop has lost its aspiration. ana ‘mama’ is identical in Uighur, Khazakh, Tatar, and Western Yugur. There are no forms identical to anai ‘mother’. Tatar has enij which is similar. badza ‘city, market’ has nearly identical forms in Uighur, Khazakh, Kirghiz, Uzbek, Tatar, and Tuva. The only apparent difference is the affricate dz in Santa and the fricative z in the other languages. There are no apparent modern day cognates for baæ ‘money’. (Lexical items that have no modern cognates will be discussed in more detail below.) For baxa ‘frog’, there is alternation in the Turkic languages between the initial p and b. The medial ɣ in Santa is realized as q, ɣ, and ɕ in the other languages. There is no cognate identical with baxa ‘frog’. The closest cognate to dan ‘wall’ in Santa is dam in Salar. In Santa, final m becomes ŋ. danGa ‘dirt clods’ has no cognates in the the TLCD. danGal from Uighur was given in *Dongxiang and Mongolian* (Bu 1986), but I have found no independent confirmation of this. dzanGa ‘walnut’ has cognates in all the languages except Salar and Western Yugur. The closest cognates are from Khazakh, Kirghiz, and Tuva which all have dʒ as the initial and not j. giædziæ ‘paper’ has a close cognate in Western Yugur, keyde. In Santa non-nasal finals are deleted, and the d has been palatalized before a front vowel. When we look at Table 6.5 later, we will see that most of the entries from the other languages, except for Tuva, are cognates as well. gægiæ ‘to burp, belch’ has cognates in all the languages but the closest forms are in Tuva and Western Yugur. Final r is usually deleted in Santa. kiæntʃi ‘hemp’ has a close cognate in

Santa	Uighur	Khazakh	Kirghiz	Uzbek	Tatar	Tuva	Salar	W. Yugur
ada	ata	ata	ata	ate, dədə	ata, etiǵ	aadʒʁ	aba	adza, ava
ana	ana	ana	ene	aji, ane	ana, eniǵ	aba	idʒa, ama	ana
anəi	ana	ana	ene	aji, ane	ana, eniǵ	aba	idʒa, ama	ana
badza	bazar	bazar	bazar	bazar	bazar	bazar	zi	geʃaŋ
bæʁ	pul	pul	pul	pul	aqtʃa	tenge	heli	menek
baʁa	paqa	baqa	baqa	beqe	baqa	paʁa	paʁa	baga
daŋ	tam	tam	tam	dəwar	diwar, istena	dʒaŋ, balʁoʃdʒaŋ	dam	baləq
daŋga	tʃalma, daŋgal ⁷⁵	kesek, topəraq	tʃalma, kesek	tʃelme	tʃalma	doburak	kezex	dərvaq, gəda
dzaŋga	jaŋaq	dʒaŋʁaq	dʒaŋʁaq	jenʁaq	jaŋaq	dʒaŋxak	χoz	xətəu, təto
giədʒiə	qeqez	qaraz	qaraz	qaraz	qaraz, qeqez	saasʁn	χaχəd	keyde
gəgiə	kikir	kekir	kekir	kekir	kikir, kiker	gegiri	kiyəʁ	gegər
kiəntʃi	kendir	kendir	kendir	kendir	kendir, kindər	kendir	gemdur	kendzer, kemdʒir
kuri	kyrə	aʁaʃ	kyrə:	kyrə	put	jijaʃ	kurə	kur

Table 6.4.(a): Words of Turkic Origin and their Correspondences in the Turkic Languages of China

⁷⁵ Source is Dongxiang and Mongolian (Bu He 1986).

Santa	Uighur	Khazakh	Kirghiz	Uzbek	Tatar	Tuva	Salar	W. Yugur
laşıka	ytʃre	kespe	kesken aʃ, kesme	øgre	kisme	xulur buda	aʃ	mentiozi
orəu	yryk	ørik	øryk	orik	yryk	øryk	irux	ʃiŋzi, xəŋzi
sidaka	sediqe ⁷⁶	--	--	--	--	--	--	--
sidzakəŋ	tʃaʃqan	təʃqan	tʃatʃqan	tifqan	tətʃqan	gysge	geme	ʃiyan
ʃidzi	tʃarek	--	tʃejrek	tʃarek	tʃarek	--	--	--
taʃi	taʃ	tas	taʃ	taʃ	taʃ	daʃ	daʃ	das
tomo	toqmaq, toxmaq ⁷⁷	toqpaq	toqmoq	toqmaq	toqmaq	dokbak	--	dzəmaq
tʃulu	tʃapaq	bəlʃəq	tʃapaq	tʃəpaq	tʃapaq	eriŋ	goz box	saŋ
tʃugu	tʃoka	saqpə	tʃøkə	naʃare tʃob	tʃøke	zakbr	tʃugu	kuezi, ʃigu
tuman	tuman	tuman	tuman	tuman	tuman	tuman, bus	duman	manan
uçin	jyz	dzyz, bet	dzyz, bet	jyz, bet	jyz, bet	arɣn	jyz	jyz

Table 6.4.(b): Words of Turkic Origin and their Correspondences in the Turkic Languages of China

Western Yugur, kendzer, with the stop palatalized in both. Again Santa has lost the ɾ here, but aspiration is present in the Santa form but in none of the others. kuri ‘utensil used to measure rice’ has a back vowel u as do the Salar and Western Yugur forms.

In Table 6.4.b above, laşıka ‘noodles’ has no apparent modern day cognate. orəu ‘apricot’ has cognates in all languages except Western Yugur.

⁷⁶ Source is the DLD, not the TCLD.

⁷⁷ Source is the DLD, not the TCLD.

Uzbek orik is the only language with a back vowel the same as Santa. sidaḡa ‘feast’ has no cognates in the TLCD. sədiqə from Uighur was given in the DLD but I have no other independent confirmation of this form in Uighur. sidzaxan ‘rat’ has cognates in Uighur, Khazakh, Kirghiz, Uzbek, Tatar, and Western Yugur. However, none of these forms has an initial ʃ. In this respect, probably the closest cognate is found in Western Yugur, ʃiyan. We will come back to this problem in Table 6.5. ʃidzi ‘scale, steelyard’ apparently has no modern cognates in the TLCD. taʃi ‘stone, rock’ has clear cognates in all the languages. Santa is different in that a final vowel has been inserted so that the Santa syllable constraints are not violated. tomo ‘mallet, hammer’ has cognates in all languages except Salar. The closest form is the Kirghiz form toqmoq which contains the same vowels as the Santa form. In Santa, syllable-final stops are deleted. ʃulu ‘gum (in the eyes)’ has no apparent cognates in the modern Turkic languages. ʃugu ‘chopsticks’ has cognates in Uighur, Kirghiz, Tatar, Salar, and Western Yugur. The Salar form ʃugu is identical to the Santa form except that the initial consonant in Santa is retroflex. tuman ‘fog’ has cognates in all the languages. The Santa form differs from all the others in that the final nasal is velar, not alveolar. uʃin ‘face, appearance’ has cognates in all the languages except Tuva. The closest forms are in Uighur, Uzbek, Tatar, Salar, and Western Yugur which have j initials. The final n in Santa is probably a nominal suffix common in both Turkic and Mongolic.

Most of the sound correspondences between the Santa form and the Turkic forms for these words are reconcilable when a few simple phonetic rules are taken into account, e.g. the loss or addition of aspiration for stops and affricates, deletion of most non-nasal coda consonants, vowel epenthesis for other non-nasal coda consonants, syllable final m becomes ŋ, fronting and backing of vowels, palatalization of alveolar stops before front vowels, and a few other phonetic changes. But there are at least two consonant correspondences that are more difficult to explain. The first is the j and dʒ alternations in the Turkic languages. Looking at dʒaŋɣa ‘walnut’ and uʃin ‘face, appearance’ in Table 6.4 above, we see that the modern Turkic languages are split generally into j-languages — Uighur, Uzbek, Tatar, Salar, and Yugur — and dʒ-languages — Khazakh,

Kirghiz, and Tuva. That is to say, in many words j and dʒ correspond in these two types of Turkic languages. For this reason, it is unlikely that dzan̄ga ‘walnut’ was borrowed from Uighur (at least modern Uighur) since it is a j-language. However, učin ‘face, appearance’ seems to have been borrowed from a j-language. Other evidence to support the fact that dzan̄ga ‘walnut’ was not borrowed from Uighur is the loss of the medial consonant g which is preserved as the reflex g in Khazakh, Kirghiz, Uzbek, and Tuva, but not in Uighur.

Another correspondence which is difficult to explain is the initial ʃ in sidzak̄an ‘rat’. The initial ʃ in Western Yugur ʃiyan ‘rat’ is probably a palatalized version of the initial s, but it does not appear in any of the other Turkic cognates. Therefore, it would seem, that a better strategy would be to look at older sources rather than the modern Turkic languages. Table 6.5 is drawn from Sir Gerard Clauson’s *An Etymological Dictionary of Pre-Thirteenth-Century Turkish* (1972), henceforth EDT. This dictionary is remarkable compilation of Middle-Turkic correspondences drawn from a variety of sources. Entries are categorized according to the period from which the source text originated.

The first column is a list of the Turkic loanwords in Santa. The second column, labeled ‘Pre-13th’ refers to the oldest form of the word known, according to Clauson. The third column gives the Karakhanide Turkic (XI-XIII century) and post-Karakhanide Turkic (XII-XIV century) form, the fourth column gives the Khwarezm Turkic (XII-XIV century) form, the fifth column gives the Chagatay Turkic (XV-XVI century) form, the sixth column gives the *Chinese-Uighur Dictionary*⁷⁸ (XIV century) form, CUD below. (Periodization following Poppe 1965.) The last column gives the Gaochang Yiyu form, GCYY below, which is a source referenced in Dongxiang and Mongolian (Bu 1986: 250) but nothing else is mentioned about it. I have been unable to attain an more information on it.

⁷⁸ *Chinese-Uighur Dictionary* was “prepared by a committee of Chinese scholars towards the end of the XIV [century] (Clauson 1972: xix).” It was based on the Buddhist-Uighur manuscript *suvarṇaprabhāsaśūtra*.

Santa	Gloss	Pre-13th	Karakhanide	Khwaresm	Chagatay	CUD	CGYY
ada	<i>papa</i>	ata:	ata:	ata	ata	--	
ana	<i>mama</i>	ana:	ana:	ana	--	--	
anai	<i>mother</i>	ana:	ana:	ana	--	--	
badza	<i>city, market</i>	--	--	--	--	--	
baʁ	<i>money</i>	bakir	bakir	bakir	--	--	baqar
baka	<i>frog</i>	baka:	baka:	baka	baka	--	
daŋ	<i>wall</i>	ta:m	ta:m, tam, da:m, dam	tam	tam	--	
daŋga	<i>dirt clods</i>	tʃalma:	tʃalma:	--	tʃalma:	--	
dzaŋga	<i>walnut</i>	yaga:k	yaga:k	--	yanjak, yanjac	--	
giadziə	<i>paper</i>	kegde	--	--	--	--	
gəgiə	<i>to hiccup</i>	kekir	kekir	--	gégir	--	
kiəntʃi	<i>hemp</i>	kendir	--	--	--	--	
kuri	<i>measuring utensil</i>	küri	--	--	--	küri	
laʃika	<i>noodles</i>	--	--	--	--	--	laqfa
orəu	<i>apricot</i>	erük	erük	--	ürk, ürük	--	
sidaʁa	<i>feast</i>	--	--	--	--	--	
sidzakaŋ	<i>rat</i>	sıtsʁa:n	sıtsʁa:n	ʃıtskan, ʃıtsan	sıtsʁan	--	
ʃidzi	<i>scale</i>	--	--	--	--	--	sidir
taʃi	<i>stone, rock</i>	ta:ʃ	ta:ʃ	taʃ	taʃ	--	
tomo	<i>mallet, hammer</i>	tokr:mak	tokr:mak (XI), tokmak (XIV)	tokmak	tokmak	--	
tʃulu	<i>chopsticks</i>	tʃelpək	tʃelpək	--	tʃilpik	--	
tʃugu	<i>gum (in the eyes)</i>	tʃøke:	--	--	--	tʃøki	
tumaŋ	<i>fog</i>	tuma:n	tuma:n	tuman	tuman	--	
uçin	<i>face, appearance</i>	yü:z	yü:z	yüz	yüz	--	

Table 6.5: Words of Turkic Origin and their Correspondences in Middle Turkic

bq̄r ‘money’ has a Middle-Turkic cognate bakir which means ‘copper coin’. This form is also cognate with the *Gaochang Yuyi* form baq̄r. Phonetically, the initial of the second syllable has been lost. Semantically, Clauson says bakir was equivalent to the Chinese qián ‘copper cash’ (Clauson 1972: 802).

dzan̄ga ‘walnut’ has cognates in Middle-Turkic, but these sources are all *j*-languages. So where does the d̄z of dzan̄ga come from? In the 13th century Mongolian *Secret History of the Mongols* literary language, Turkish borrowings that have a *j*/*d̄z* alternation begin with d̄z (Clauson 1959:184-5). This shows a *d̄z*-language existed prior to the writing of the *Secret History*, even though there seem to be no early written records of it other than the borrowings in the *Secret History*. References of early Turkic loans in Mongolian do not mention dzan̄ga ‘walnut’ as an early Turkic loan (Poppe 1955, Clauson 1959), so it would seem dzan̄ga ‘walnut’ was not likely already present in the Mongolic variety to which the Santa ancestors switched. Therefore, although there are apparently no written records of this Middle-Turkic language *d̄z*-language, it is at least possible that the source of this loan was a Middle-Turkic *d̄z*-language.

qīdz̄īə ‘paper’ has a Middle-Turkic cognate, keqde. The only modern Turkic cognate that is similar is found in Western Yugur, keyde. In Santa, the initial aspiration and the syllable coda consonant *q* have been lost. In addition, the q̄ has been palatalized before a front vowel. The other modern Turkic cognates possibly derive from the same source, but the velar stops have become uvular obstruents and q̄ has become z̄. See Table 6.4 above.

sidzak̄an̄ ‘rat’ is the most interesting case. When we compare sidzak̄an̄ ‘rat’ with the Middle-Turkic correspondences, we see that the initial s̄ is actually a preservation of the Middle-Turkic pronunciation. This is lost in all modern Turkic languages where the s̄ has become an affricate or has been palatalized to ʃ. The t̄s̄ coda of the first syllable in the Middle-Turkic form has lost its aspiration and an epenthetic vowel a has been inserted so the Santa syllable constraints are not violated.

tomo ‘mallet, hammer’ seems to be derived directly or indirectly from the XIVth century pronunciation tokmak where the second syllable has already been lost. In Santa, the codas of both syllables have been lost due to Santa syllable constraints.

tsulu ‘gum (in the eyes)’ appears to have a Middle-Turkic cognate, tselpek. What is interesting about this case is that none of the modern Turkic cognates in Table 6.4 retain the Middle-Turkic l. Santa retains this l but has apparently lost the second syllable altogether. The backing of front vowels is a common phonetic change in Santa.

There are three items where I have been unable to identify Middle-Turkic sources or cognates. badza ‘city, market’ and sidaka ‘feast’ are not found in the EDT, and the correspondences listed for Santa danGa ‘dirt clods’ are not cognate. badza ‘city, market’ has cognates in the modern Turkic languages and is likely a modern borrowing.⁷⁹ The status of sidaka ‘feast’ and danGa ‘dirt clods’ is questionable. However, danGul ‘dirt clods’ is found in Hasibate’er (1985:189) *Tuzuyu Cihui, Monguor Language Dictionary* and it also gives danGal as its source from Uighur. On the other hand, neither of these words was found in Hahn (1991) *Spoken Uyghur*.

There are also two items where the only source is the *Gaochang Yuyi*. These are lasika ‘noodles’ and sidzi ‘scale, steelyard’.

6.3.1 Summary

It is my hypothesis that most of the Turkic loans in Santa were either borrowed early on in Santa history, in the 13th or 14th century, or retained from the original Turkic language some of the Santa ancestors spoke. If we compare the modern Santa form of the Turkic loan with the Middle-Turkic forms in Table 6.5, there are only a few items that clearly do not seem to have been borrowed from Middle-Turkic. These are badza ‘city, market’, danGa ‘dirt clods’, and sidaka

⁷⁹ The original source of badza ‘city, market’ is Persian, but Santa has borrowed this lexical item from one of the modern Turkic languages, not directly from Persian.

‘feast’. In fact, the latter two, *daŋga* ‘dirt clods’ and *sidaxa* ‘feast’, are the most questionable whether they are Turkic loans at all. All of the other loans could have been derived directly from the Middle-Turkic forms. Additional evidence to support this view, is the retention of initial /s/ in *sidzakax* ‘rat’ and the /l/ in *tsulu* ‘gum (in the eyes)’, neither of which are found in the Modern Turkic languages of China. Also, *bax* ‘money’ has no cognates in the modern Turkic languages but a clear one is present in Middle-Turkic.

This evidence in no way proves that these loans were borrowed direct from Middle-Turkic, but it is highly supportive of the possibility. In addition, the variability of the modern Turkic reflexes in Table 6.4 make it more plausible that Santa borrowed (or retained) these items from a unitary source in Middle-Turkic, rather than a number of different modern Turkic source languages, which is what would be necessary to account for all the Turkic loans in Santa.

6.4 Persian Loans

Table 6.6 is a list of Persian loanwords in Santa. Many of these items have importance in Islam, the religion of the Santa. The source word given in the last column is in classical Persian. Most of the Persian loans vary little from the classical form. Most of the changes can be easily accounted for when Santa syllable structure constraints are taken into account.⁸⁰

⁸⁰ Special thanks to Jon Armajani for his help in tracing the sources for the Persian and Arabic loans. Most of the source word information was drawn from Aryanpur-Kashani & Manoochehr (1986), Doniach (1982), Haim (1993), Steingass (1892, 1975), and Wehr (1979).

Entry	Gloss	Source Language	Source Word
asimaŋ	sky, heaven	Persian	āsmān
asimaŋ dźiəɾə	in the sky, in heaven	Persian/Santa	āsmān
asimaŋ dźiəɾədu taʃi	meteorite	Persian/Santa/Turkic	āsmān, taš
axuŋ	ahung, imam, Islamic Priest	Persian	āḫūnd. (āḫhūnd)
fugia adźiəsi	full ceremonial cleansing, washing of the entire body according to religious customs	Santa/Persian	ābdast
mila adźiəsi	small ceremonial cleansing, to take a small bath	Unknown/Persian	ābdast
biəmar	illness, sickness	Persian	bīmār
dəsida	long piece of cloth for wrapping the head	Persian	dastār
dodzo	hell, inferno	Persian	dozaḫ, (dozakh)
dosi	friend	Persian	dost
dosi ada	adoptive father	Persian/Turkic	dost, ata
dosi ana	adoptive mother	Persian/Turkic	dost, ana
dosi tani	to make friends	Persian/Santa	dost
dosidži	friend (form of address among believers of Islam)	Persian	dosti
džəmi ~ džəmiŋ	the earth, the globe	Persian	zamīn
džəmi gondziə	for the ground to freeze	Persian/Santa	zamīn
džəmi godziəlu	to have an earthquake, for the earth to quake	Persian/Santa	zamīn
džəmi pautci	to dig earth, to excavate earth	Persian/Chinese	zamīn, páo
džəmi wangjiə	liver mosses, tundra	Persian/Santa	zamīn
maidza	grave, tomb	Persian	murda
pəri	God	Persian	parī

Table 6.6: Persian Borrowings in Santa

6.5 Arabic Loans

Table 6.7 is a list of Arabic loanwords in Santa. Again, many of these items are related to Islam. The source word in the last column is classical Arabic.

Entry	Gloss	Source Language	Source Word
'aḡili	wisdom, ability	Arabic	ʔaql
'aḡilitu	intelligent, resourceful	Arabic/Santa	ʔaql
aḡali	kinfolk, relatives	Arabic	aḡālī
baḡatṣəu	ox, bull	Classical Arabic	baḡar
baḡatṣəu fugiə	bull, ox	Arabic/Santa	baḡar
bəlia	calamity, disaster, suffering	Arabic	balāʔ
bəlia bau	to meet disaster, to come across disaster, to encounter suffering	Arabic/Santa	balāʔ
duja ~ dunja	world, man's world, life	Arabic	dunyā
duja dʒiəɾə	on the world, in the world	Arabic/Santa	dunyā
duja idʒiə	to die (indicates death of Islamic believer or member of local nationality)	Arabic/Unknown	dunyā
dujani alan	world	Arabic/Unknown	dunyā
dʒumaɾ	Friday, day of weekly Islamic worship	Arabic	jumʔa
ḡa'ləbu	body, stature, figure	Arabic	qālab, qālib
ḡa'ləbu fugiə	big and tall stature	Arabic/Santa	qālab
ḡuraŋ nasuŋni baḡatṣəu	three year old ox	Santa/Arabic	baḡar
ḡuraḡaŋ	Koran	Arabic	qurʔān
ibi'lisi	devil, person who sows discord	Arabic	iblis

Table 6.7.(a): Arabic Borrowings in Santa

'məhəri	dowry, bethrothal gifts	Arabic	muhūr, mahṛīh
məxə'luxi ~ məhə'luxəi	people and all kinds of animals	Arabic	unknown
mətʃi	mosque	Arabic	masjid
mudzəfəi	sweeper of a mosque, odd-jobman in a mosque, handyman in a mosque	Arabic	mujāwir
naija baxətʃəu	one to two year old male cow	Chinese/Arabic	nāiyá, baqar
nika	marriage contract	Arabic	nikāḥ
orodzo	fast (abstain from meat, wine, etc.), vegetarian diet adopted for religious reasons (Ramadan)	Arabic	ramaḍān
orodzo bari	to seal a fast	Arabic/Santa	ramaḍān
orodzo niə	to resume a meat diet, to end a fast	Arabic/Santa	ramaḍān
orodzo tai	to come to the end of Ramadan	Arabic/Santa	ramaḍān
'saxari	breakfast fast	Arabic	saḥar
ʃəitəŋ	ghost, (evil) spirit, apparition	Arabic	shaiṭān
tasibixaə	counting beads; beads, rosary	Arabic	tasbīḥ
tɕida	Koran	Arabic	kitāb
zuhə	soul, spirit	Arabic	rūḥ

Table 6.7.(b): Arabic Borrowings in Santa

In this chapter I have looked at the Santa lexicon. I have looked in detail at the borrowed Hui nouns, verbs, and adverbs in Santa. I have also gone into some detail concerning words of Turkic origin in Santa and have hypothesized that many of these lexical items may have been retentions from Turkic or at the very least they may be old loans from possibly the 13th or 14th century. Finally I have briefly listed the Persian and Arabic loans in Santa and pointed out that many of these are related to Islam.

Chapter 7

The Noun Phrase and the Postpositional Phrase

7. Introduction

In this chapter, I will describe the noun phrase and the postpositional phrase in Santa. Included in this discussion will be descriptions of word order within the noun phrase in section 7.1; the component parts of the noun phrase including determiners, numerals, measure words, adjectives, pronouns, and nouns in section 7.2; case in section 7.3; and definiteness and indefiniteness in section 7.4. The postpositional phrase is discussed in section 7.5. In addition, there is an in-depth discussion of adjectives in section 7.2.4.

7.1 Word order within the noun phrase

In this section I will give some examples of basic word order within the noun phrase. The basic word order is illustrated below.

(1) Basic noun phrase word order:

$$\text{NP} = \left\{ \begin{array}{c} (\text{Dem}) + (\text{Num}) + (\text{Adj}) + \text{Noun} \\ \text{Pro} \end{array} \right\} - (\text{Case})$$

(1) says that a noun phrase in Santa consists of at least a noun, optionally preceded by a demonstrative, a numeral, and an adjective, in that order. The noun may be case-marked, depending on its grammatical role in the sentence, but case marking can be understood as marking the whole noun phrase, and not just the noun. Case will be discussed in more detail in section 7.2.7. A noun phrase may also consist of a lone pronominal element, such as a pronoun, or a demonstrative that is functioning as a pronominal element.

Some representative examples of NPs are given below.

- (2) xoxodəu-də [niə səiɣəŋ ɕiən]^{NP} wo. T8:02
 vole-DT one beautiful tail have.
The vole had a beautiful tail.
- (3) ɕiəni-də=ni [ənə ɣurəŋ ʃənɕiən-la]^{NP} pəsə irə=də ... A2:093
 night-LC=TM this three celestial.being-PL again come=DQ
At night, after these three celestial beings came again ...
- (4) ... [ənə dʒiəron dʒi-də]^{NP-LC} xoji-dʒi udu dawa-ka+dʒiwo. N2:028
 this four market-LC sell-SS day pass-CS+PROG
... I was passing my days selling at these four markets.

In (2) above, the NP niə səiɣəŋ ɕiən ‘a beautiful tail’ consists of a numeral, an adjective, and a noun.

The NP ənə ɣurəŋ ʃənɕiən-la in example (3) consists of a demonstrative, a numeral, and a noun.

In (4), the NP ənə dʒiəron dʒi-də is in the locative case and consists of a demonstrative, a numeral, and a noun.

There are also some types of NPs that are not covered by (1) above. In (5), mini kidə ‘my house’ is a possessor-possessed construction. The possessor-possessed construction actually consists of two NPs, mini ‘my’ and kidə ‘house’. The possessor NP mini ‘my’ is in the genitive case and the possessed NP kidə ‘house’ is the head noun and is in the locative case.

- (5) məliəʃida [[mi-ni] [ki-də]]^{NP-LC} [dolon kuŋ]^{NP} wo. N2:002
 formerly 1SG-GN house-LC seven person EXST
Formerly, there were seven people in my house.

The second NP in (5) above is dolon kuŋ ‘seven persons’ and consists of a numeral preceding a noun.

In example (6), there are two NPs, hə niə əkəŋni kuŋ ‘that one village’s person’ and ənə niə əkəŋni urəudə ‘this one village’s young lady’. Both NPs consist of a possessor NP in the genitive case and a possessed NP. In the first instance, the possessed NP is in the nominative case and in the second instance the possessed NP is in the benefactive case. The internal structure of the possessor NPs is identical consisting of a demonstrative, a numeral and a noun.

- (6) uh ingiə-sə [[hə niə əkəŋ-jī] [kuŋ]]^{NP} [[ənə niə
uh and.so-DL that one village-GN person this one
- əkəŋ-ni] [urəu-də]]^{NP} jau tʂatɕiən quxo-lə irə=nə. MC:020-1
village-GN young.lady-BN want tea.money give-SP come=IMP
- Uh, and so that one village’s person wants to come and offer tea money
(propose engagement to the parents) for this one village’s young lady.*

In (7), the NP consists of a numeral followed by a nominalized verb fugusən ‘dead’ followed by a noun. The nominalized verb and the following noun are functioning together here as a compound noun. For a discussion of compound nouns see section 7.2.6.1. For discussion of nominalized verbs and clauses see section 8.2.3 in Chapter 8.

- (7) mo dʒiərə ətʂi=də ɕiəŋdʒi-ni niə-sə
road on go=DQ chest-AC open-DL
- [niə fugu-sən kuŋ]]^{NP} wo. A1:122
one die-P.NM person EXST
- After going on the road, [they] opened the chest, and there was a dead
person in it.*

In (8) is another NP construction not covered by (1) above. Following the borrowed Chinese numeral is a borrowed Chinese measure word. Both of these in

turn precede the head noun antaŋ ‘gold’. Measure words and classifiers are discussed in section 7.2.3.

- (8) ingiə ənə kəwaŋ-də [saŋʃi lian antaŋ]^{NP} oŋi-wo. A1:143
 and.so this boy-DT thirty MW:tael gold give-PRF
 And so [he] gave this boy thirty tael of gold.

In example (9) below, the first complex NP consists of two NPs, bidziən ‘we (exclusive)’ and duŋxian kuŋ ‘Dongxiang people’, in appositive relationship with each other. The next NP, pədzədzi sata-la ‘other Muslim peoples’, which consists of an adjective and a noun, is in a coordinate relationship with the first NP. There is no overt conjunction which is a common strategy in Santa. But see section 7.2.7 for more information on the conjunction dzi.

- (9) [[[bidziən] [duŋxian kuŋ]]^{NP} [pədzədzi sata-la]^{NP}]^{CO-NP}
 I PLEXNM Dongxiang person other Muslim.people-PL

 [[[qawgəi miɤa]^{NP} [noɤəi miɤa]]^{NP}]^{CO-NP} uliə idziə=nə. N1:041
 pig meat dog meat I.NEG eat=IMP

We Dongxiang and and other Chinese Muslim people do not eat pig meat or dog meat.

The last NP in (9) above, qawgəi miɤa noɤəi miɤa ‘pig meat and dog meat’ also consists of two NPs in a coordinate relationship with each other without an overt conjunction. This NP is the direct object of the verb uliə idziənə ‘not eat’ and is unmarked. The coordinated NPs both consist of compound nouns, qawgəi miɤa ‘pig meat’ and noɤəi miɤa ‘dog meat’.

(10) is another example of a complex NP and is not covered by (1) above. This NP consists of two attributive adjectives, ɣini ‘new’ and quaitʃəŋ ‘old’, coordinated with dzi. These are followed by a numeral and a borrowed Chinese

classifier which in turn are followed by the borrowed Chinese head noun miaŋdzəŋ ‘felt blanket’.

- (10) [ʃini quaitʃəŋ dʒi ɡuri tɕiau miaŋdzəŋ]^{NP} wo. N2:115
 new old and three CL felt.blanket have
[Our house] has three new and old felt blankets.

The placement of the adjectives before the numeral and classifier is interesting and is probably motivated by the presence of the classifier following the numeral. Structures of this type are rare but deserve further investigation.

7.2 Components of the noun phrase

The basic components of the noun phrase in Santa are demonstratives described in section 7.2.1, numerals in 7.2.2, measure words and classifiers in 7.2.3, adjectives in 7.2.4, pronouns in 7.2.5, and nouns in 7.2.6.

7.2.1 Demonstratives

In this section, I will describe demonstratives in Santa. There are two demonstratives: ənə ‘this (proximate)’ and hə ‘that (distal)’. They function as both demonstrative adjectives and demonstrative pronouns. The demonstrative adjective use of ənə ‘this’ and hə ‘that’ is illustrated in (11) and (12).

- (11) quitʃi udu [ənə 'basi]^{NP} [hə toro]^{NP} irə-wo. F08:25
 next day this tiger that place come.
The next day this tiger came to that place.
- (12) [ənə kəwəŋ]^{NP} [hə niənəigia]^{NP} əxu+sənu ala-wo. T6:132
 this boy that grandmother beat+DM kill-PRF
This boy beat up that grandmother and killed her.

In each case, ənə ‘this’ occurs in an NP with a head noun. The same is true for hə ‘that’.

They may also function as demonstrative pronouns. An example of this is shown below.

- (13) *ətɕiə-də niə 'basi wo,*
 past-LC one tiger EXST

ənə giəru-dzɿ irə-sə niə tauləi xolu-dzɿ giəru-dzɿ irə-wo. F07:1-2
 this cross-SS come-DL one rabbit run-SS cross-SS come-PRF

Once upon a time, there was a tiger. As this one [the tiger] was crossing, a rabbit came running crossing.

In this case, *ənə* ‘this’ is co-referential with the ‘tiger’ that was introduced in the previous clause.

In (14), both instances of *hə* ‘that’ are pronominal and are co-referential with *xuru xuru* which is onomatopoeic for breathing.

- (14) “*tɕi-ni xuru xuru hə ʃi jaŋ wo?*” *giə-sə,*
 2SG-GN ONOM ONOM that COP.H what COP.S say-DL

“*hə ʃi mi-ni qawa wo,*” F06:18-20
 that COP.H 1SG-GN nose COP.S

“Your ‘xuru xuru’, what is that?” [he] says.

“That is my nose.”

When *ənə* ‘this’ is used as demonstrative pronoun, it may take the plural marker *-lə*. This is because the demonstrative pronoun is the head of the NP and therefore may take the plural marker. An example of this is shown below where *ənələ* ‘these’ is co-referential with ‘men’ mentioned earlier in the text.

- (15) *ənə-lə niəndə aji=dənə xolu-ndu-Ø wəida-wo.* A1:123
 this-PL suddenly afraid=DQ run-together-SN disappear-PRF

These [men] were suddenly afraid, and ran off together and disappeared.

- (16) ajə giə-ku-də Goni imaŋ fugiaə ənə-la-ni
 Muslim.festival do-I.NM-LC sheep goat ox this-PL-AC

gur-udu-də dzaru-dzi bara-ɣa=nə. N1:029
 three-day-LC slaughter-SS finish-CS=IMP

During the Muslim festival, the slaughtering of sheep, goats, and oxen is finished in three days.

In (16) above, ənəla ‘these’ is co-referential with ‘sheep, goats, and oxen’ which are not human, but are animate. Although ənəla ‘these’ is most often co-referential with animate nouns, it is sometimes co-referential with inanimates, but these cases are rare.

hə is also the third singular pronoun ‘3SG’⁸¹ and is certainly historically related to the demonstrative pronoun usage of hə ‘that’. Sometimes instances of həla are ambiguous between the demonstrative pronoun usage (which has a contrastive/emphatic function) and the third person plural pronoun usage (which does not). An example of this is given below.

- (17) hə-la xolu-dzi xolu-dzi niə moran ɣudza ətʃi-sə
 3SG-PL run-SS run-SS one river edge go-DL

moran fugiaə wo, T2:078
 river large COP.S

They (those children) ran and ran until they came to the river’s edge, and the river was large.

When ənə ‘this’ is used as a demonstrative pronoun, it may receive case marking because it is the head of the NP. Example (16) above has ənəlani ‘these’

⁸¹ There is another third singular pronoun tərə which is less common. Historically it may be older though.

in the accusative case. Another example of ənə ‘this’ in the accusative case is given below where it is the object of the verb mədziə ‘to know’.

- (18) “tʃi-ni quəina ɡorɔŋ-də ədzikɔŋ antɔŋ wo,
2SG-GN back courtyard-LC some gold EXST

tʃi ənə-ni uliə mədziə=nə.” A2:077-8

2SG this-AC I.NEG know=IMP

“In your back courtyard there is some gold. You do not know this.”

The demonstrative pronoun ənə ‘this’ can also be found in the dative case. This is shown below where ənə is co-referential with baŋ juanwəi ‘Lord Bang’. The NP ənədə ‘to him’ is in the dative case to indicate possession along with the verb wo ‘to have’.

- (19) ətɕiə-də niə baŋ juanwəi wo.
long.ago-LC one Bang richman EXST

ənə-də niə otɕin wo. T5:01-2

this-DT one girl have

Once upon a time there was Lord Bang. He had a daughter.

When ənə ‘this’ and hə ‘that’ are in the locative case, they can mean ‘here’ and ‘there’. They usually appear as ənən and hən respectively when they are used in this way. Examples of ənəndə ‘here’ and həndə ‘there’ are given below.

- (20) ənən-də niə sara ji kuai bæ-ni litɕiən wo. N2:048
this-LC one month one MW:dollar money-AS interest EXST

Here there is one dollar a month interest.

- (21) bi jə hən-də ətʃi=nə. T2:025
 1SGNM also that-LC go=IMP
I am also going there.

I have no examples of the ablative -sə or instrumental =Gala case being used with demonstratives.

Another way that ənə is used is as a pause filler in Santa. This is similar to the usage of nèige in Chinese except that nèige is the distal demonstrative and ənə is the proximate.

7.2.2 Numerals

The use of numerals in Santa has been greatly influenced by language contact with Hui Chinese. Indigenous Santa numerals consist of the numbers one to ten and an archaic term for twenty that is rarely used. These are illustrated in the following example.

(22)	niə	‘one’
	gua ~ guar	‘two’
	guraŋ ~ gurwaŋ	‘three’
	dziəroŋ ~ dziərwaŋ	‘four’
	tawuŋ	‘five’
	dziʒoŋ	‘six’
	doloŋ	‘seven’
	nəimaŋ	‘eight’
	jəsəŋ	‘nine’
	harəŋ ~ harwaŋ	‘ten’
	qoroŋ	‘twenty (archaic)’

All numerals in Santa above ten are borrowed from Chinese. In addition, the Chinese numerals from one to ten are also commonly used. These are given in (23).

(23)	ji	'one'
	ɤ	'two'
	san	'three'
	si	'four'
	wu	'five'
	liu	'six'
	tɕi	'seven'
	ba	'eight'
	dʒiu	'nine'
	ʂi	'ten'

The numbers 'eleven' through 'nineteen' are expressed in Santa by placing the borrowed Chinese numerals ji 'one' through dʒiu 'nine' after the borrowed Chinese numeral ʂi 'ten'. Indigenous numerals are not used. The inferred relationship here is one of addition, where for example ʂi 'ten' plus ji 'one' equals ʂiji 'eleven'. Some examples are given below.

(24)	ʂiji	'eleven'
	ʂisan	'thirteen'
	ʂiliu	'sixteen'

Multiples of ten in Santa are expressed by placing the borrowed Chinese numerals 'two' through 'nine' before 'ten'. The inferred relationship here is one of multiplication, where for example ɤ 'two' times ʂi 'ten' equals ɤʂi 'twenty'. Some examples are given below.

(25)	ɤʂi	'twenty'
	wuʂi	'fifty'
	baʂi	'eighty'

Higher multiples are also expressed in Santa with borrowed Chinese numerals. The inferred relationship here is also one of multiplication, where for example san 'three' times wan 'ten thousand' equals sanwan 'thirty thousand'.

The unit wan is different from English in that there is a distinct counting unit for ‘ten thousand’ in Chinese which has been borrowed into Santa.

- | | | |
|------|--------|----------------|
| (26) | jibai | ‘one hundred’ |
| (27) | ətɕiən | ‘one thousand’ |
| (28) | sanwan | ‘ten thousand’ |

7.2.2.1 Some Examples of how Santa Numerals Are Used.

In this section, I will look at how indigenous Santa numerals are used. Indigenous Santa numerals precede the noun they are modifying. They may also optionally precede a measure word, but generally, they may not precede a classifier. This point is discussed in more detail in section 7.2.3. When an indigenous Santa numeral is used, usually the noun it is modifying is indigenous as well, as in example (29).

- (29) niə xon-də=ni bidziən guraŋ kuŋ gur-udu guraŋ ɕiəni
 one year-LC=TM 1PLEXNM three person three-day three night

idziə-wu-ni əsə idziə-wo. N2:022

eat-I.NM-AC R.NEG eat-PRF

One year, we three people for three days and three nights did not eat anything.

In (29) above, guraŋ ‘three’ precedes kuŋ ‘person’, udu ‘day’ and ɕiəni ‘night’. These are all indigenous nouns. Notice that guraŋ ‘three’ and udu ‘day’ are contracted. All the Santa numerals from one to ten are contracted when they precede udu ‘day’. Some other instances are shown below.

- | | | |
|------|----------|-------------------------|
| (30) | ni-udu | ‘one day’ from niə |
| | Guar-udu | ‘two days’ from Guar |
| | dzik-udu | ‘six days’ from dzikon |
| | dol-udu | ‘seven days’ from dolon |

The contraction process is regular. In each case, the final nasal and the last vowel of the numeral are deleted and udu 'day' is attached.⁸²

The numeral niə is also contracted before udziəsilien 'evening' in niudziəsilien 'one night, a whole evening'.

A related morphophonemic process occurs in numerals when they precede certain measure words. Some instances are shown below.⁸³

- | | | |
|------|------------|--------------------------------------|
| (31) | Guari şuaŋ | 'two pairs' from Guar 'two' |
| (32) | dziəri ka | 'four bowls of' from dziəronŋ 'four' |
| (33) | hari fa | 'ten times' from haronŋ 'ten' |

In cases like this, the suffix -i is attached to numerals 'two' through 'ten', but this process is not regular. For Guar 'two', there are no morphophonemic changes and for the others, the final nasal and the last vowel are deleted before -i is attached. The irregularities arise from the insertion or retention of a vowel just before the suffix in the numerals 'six' through 'nine'. All of the allomorphs are given below.

- | | | |
|------|---------|----------------------|
| (34) | Guari | 'two' from Guar |
| | Guri | 'three' from Guraŋ |
| | dziəri | 'four' from dziəronŋ |
| | tawi | 'five' from tawuŋ |
| | dziəuəi | 'six' from dziəronŋ |
| | doləi | 'seven' from dolonŋ |
| | nəiməi | 'eight' from nəimaŋ |
| | jəsuaəi | 'nine' from jəsuaŋ |
| | hari | 'ten' from haronŋ |

⁸² Except for in niə 'one' which does not have a final nasal and Guar 'two' which ends with /r/. In the latter case, udu 'day' is attached with no morphophonemic changes.

⁸³ I have not yet been able to determine why certain measure words require the -i suffixed numerals and why others do not.

In (29) above and in (35) below, xon ‘year’ is a noun that measures a length of time. In both cases they are preceded by the numeral niə ‘one’

- (35) niə xon olia-sə guruŋ idziə=nə. T5:46
 one year half-AB wedding.feast eat=IMP
After one year and a half, the wedding feast will be eaten.

In addition to xon ‘year’, udu ‘day’, sara ‘month’ are also nouns which measure a length of time. These nouns may be used as measure words if they precede another noun which they are quantifying, but generally these nouns occur independently. When a numeral precedes these temporal nouns, it is always an indigenous numeral, never a borrowed Chinese numeral. If the numeral is higher than ten, then a borrowed Chinese numeral is used along with a borrowed Chinese temporal noun. See section 7.2.2.2 for examples. An example is given in (36) where the indigenous numeral guraŋ ‘three’ precedes the temporal noun sara ‘month’.

- (36) əɣw=dənə hə qari-dzi giə-də-nə ətʃi+sənu
 beat=DQ 3SGNM return-SS house-LC-RP go+DM

guraŋ sara godziəlu da-wo. T5:87
 three month move unable-PRF

After being beaten, as soon as he returned to his house, he was unable to move for three months.

Occasionally one finds Santa nouns used as measure words following indigenous numerals.

- (37) “gua hamusa miəngu dʒi gua hamusa antaŋ
two plate silver and two plate gold

tʃi agi-dʒi ətʃi=də dʒaru-lə ətʃi-Ø.” T6:035

2SGNM take-SS go=DQ make.use.of-SP go-IMPR

“Go, you go and take two plates full of silver and the two plates full of gold and make use of it.”

In the example above, hamusa ‘plate’ is a container and is used as a measure word for miəngu ‘silver’ in the sense ‘plate full of silver’. It does not mean ‘silver plate’ in this case.

Indigenous Santa numerals can precede borrowed nouns of Chinese and other origins as well as shown in (38) and (39).

- (38) ɕiəni-də=ni guraŋ səŋɕiəŋ iɾə=də
night-LC=TM three celestial.being come=DQ

gudəu buluŋ-də hamara-ndu-wo. A2:029

well edge-LC resting-R/C-PRF

At night, three celestial beings came and rested at the well’s edge.

- (39) biɖziəŋ ənə santa-də niə xonj gua aɟə wo. N1:001
1PLEXNM this Santa-DT one year two Muslim.festival have
Each year, we Santa people have two Muslim festivals.

In (38) above, guraŋ ‘three’ modifies the noun səŋɕiəŋ ‘celestial being’ (from Chinese shénxiān ‘supernatural being, celestial being, immortal’). In (39) above, gua ‘two’ modifies the noun aɟə which is borrowed from probably Persian or Arabic and means a ‘Muslim festival’.

Indigenous numerals (below ‘ten’) may occur with Chinese measure words which in turn modify a Chinese noun, as shown below.

- (40) ənə əndzəxə=gala bi badza-sə
 this donkey=INST 1SGNM city-AB

guraŋ dundzi gansuŋ atʃi-dʒi ira-wo. N2:027
 three MW:cluster dried.onions carry-SS come.

I used the donkey to carry three clusters of dried onions from the city.

In this example, guraŋ ‘three’ precedes the borrowed Chinese measure word dundzi ‘cluster’ which modifies the borrowed Chinese noun gansuŋ ‘dried onions’.

The indigenous numeral plus borrowed Chinese measure word combination may also precede an indigenous noun as in (41). It should be noted the gaŋ ‘jar’ (from Chinese qāng) is a container being used as a measure word and is not a classifier. When the indigenous numeral co-occurs with a borrowed Chinese measure word, the measure word is never obligatory.

- (41) iŋgiə ənə-la atʃi-dʒi quəina ɡoroŋ-ni daŋ kuan-da
 and.so this.PL go-SS back courtyard-AS wall foot-LC

niə wa-ji-sə haraŋ gaŋ antaŋ qudzə-wo. A2:079
 one dig-BVS-DL ten jar gold come.out-PRF

And so these [men] went and dug at the foot of the back courtyard's wall and ten jars full of gold came out.

Indigenous numerals are used to express age when it is ten or younger as in (42). For a similar example for age above ten with Chinese numerals, see (55) below.

- (42) bi jəsun olu-sə ana=mi-ni duja idʒiə-wo. N2:011
 1SGNM nine reach-DL mama=1SG-GN world eat-PRF

When I was nine years old, my mama died.

Two consecutive numerals may be placed side-by-side to express an ‘or’ relationship when the exact number is unclear. This is illustrated in (43). Also see example (54) below for a parallel case with Chinese numerals.⁸⁴

- (43) ... gua guraŋ giə-ni bai-ka+dziwo. T6:078
 two three house-AC build-CS+PROG
 ... *two or three houses had been built.*

Numerals can also serve as the head of an NP as in (44).

- (44) “tʃi-ni tɕiauruŋ lian-mian-ni
 2SG-GN head two-side-NM
 [hə gua]^{NP} ʃi jaŋ wo?” F06:43
 those two COP.H what COP.S
 “*On both sides of your head, what are those two things?*”

In this example, lianmian ‘two sides’ is a borrowed Chinese numeral lian ‘two, couple’ followed by a Chinese measure word mian ‘side’. (The numeral lian ‘two, couple’ is used with measure words and classifiers in Chinese and not ɤ ‘two’.) The indigenous numeral gua ‘two’ is referring back to the nominalization lianmianni ‘two sides thing’. Notice that gua ‘two’ is not truly a pronominal since it is preceded by the demonstrative adjective hə ‘that’.

An interesting use of the numeral niə ‘one’ in Santa is its usage preceding verbs. When used before a verb the meaning of the verb has a *delimiting aspect* (Li and Thompson 1981: 232) where the meaning is ‘a little bit’ or ‘for a short

⁸⁴ xodza ‘or’, a borrowed Chinese conjunction (from huòzhě) is sometimes used in Santa, but I have never seen it used with numerals.

time’. This is illustrated in (45) with two occurrences of niə ‘one’ preceding a verb.⁸⁵

- (45) qu irə ixəu, mori niə əji-sə niə tsə-ji-sə
 come.out come after horse one frightened-DL one surprised-BVS-DL
- niə dzulu xolu-wo. BH:18-21
 one short.while run-PRF
- After [the dog] came out, the horse was a little frightened and a little surprised, and ran for a short while.*

An isolated case is given in (46), where the numeral gua ‘two’ is preceding the verb dziji ‘to blink’. It seems to be functioning here as an adverbial modifier meaning ‘twice’.

- (46) gua dzi-ji-sə dzəŋgəi funiəŋəŋ-ni la-ji xolu-wo. F11:47
 two blink-BVS-DL wolf fox-AC pull-BVS run-PRF
- Because [the fox] blinked twice, the wolf pulled the fox and ran away [with him on his back].*

7.2.2.2 Some Examples of how Chinese Numerals Are Used

In this section, I will look at how borrowed Chinese numerals are used. One way is that borrowed Chinese numerals differ from indigenous Santa ones is that a measure word or a classifier almost always follows the borrowed numeral. This is because numerals almost always co-occur with a measure word or classifier in Chinese and are thus borrowed as an inseparable unit.

⁸⁵ In Chinese, however, the *delimiting aspect* pattern is ‘V-yi-V’ where yi is the numeral one. The verb that follows yi ‘one’ is a reduplication of the first verb. Aspect is marked on the first verb, not the reduplicated one (Li and Thompson 1981: 232-6).

In (47), the numeral liuʃi ‘sixty’ is followed by the borrowed classifier da which in turn is followed by the borrowed Chinese noun tunjan ‘copper coins’ they are modifying.⁸⁶

(47) bi hən-də udzə-ʒa-lə ətʃi-sə
 ISGNM there-LC see-CS-SP go-DL

nama-sə liuʃi-da tunjan kərəu-wo. N2:120

ISG-AB sixty-CL copper.coin want-PRF

I went there to see [a doctor], and he wanted sixty copper coins from me.

In (48), the Chinese numeral tɕiʃiə ‘seventy-two’ is followed by the classifier giə (phonetically adapted from the most common classifier in Chinese ge) which in turn is modifying a Santa noun mina ‘lash’. In this case, a borrowed Chinese numeral must be used because the amount is above ten. A classifier or measure word must occur after the Chinese numeral since it is modifying the following noun.

(48) ənə dzotʃəŋ-ni gudaŋ kiəliə-wo
 this guest-AC lie say-PRF

giə-dzɿ tɕiʃiə-giə mina əxu-wo. T5:85-86

do-SS seventy.two-CL lash beat-PRF

The guest [who] told a lie was beat with seventy-two lashes.

A similar example is given below where the borrowed Chinese numeral sanʃi ‘thirty’ is followed by the borrowed Chinese measure word lian ‘tael’ which both in turn modify the Santa noun antan ‘gold’.

⁸⁶ da ‘CL’ may mean ‘dozen’ (from Chinese dá), but the Chinese translation in Bu (1986) gives ge ‘CL’ which is the all-purpose classifier in Chinese. I have little doubt however that da ‘CL’ is a Chinese loan.

- (49) ingiə ənə kəwəŋ-də sansi lian antan ogi-wo. A1:143
 and.so this boy-DT thirty tael gold give-PRF
And so [he] gave this boy thirty tael of gold.

Similar to examples (29) through (36) above where Santa indigenous numerals must precede Santa temporal nouns for day, month, and year, borrowed Chinese numerals must also precede borrowed Chinese temporal nouns for day, month, and year. These temporal nouns are identical to their Santa counterparts in that they need not modify other nouns, but can be used as measure words. In (50), the numeral sansi ‘thirty’ precedes the temporal noun tɕiən ‘day’.

- (50) ingiə-dzi bidziən sansi tɕiən orodzo bari=nə. N1:008
 and.so-SS 1PLEXNM thirty day Ramadan.fast take=IMP
And so we take thirty days for the Ramadan fast.

In (51), the Chinese numeral si ‘four’ precedes the the Chinese temporal noun nian ‘year’. Notice here that the numeral is under ten, so the Santa numeral dziəron ‘four’ could be used, but since the numeral is co-occurring with the borrowed Chinese temporal noun nian ‘year’, the borrowed Chinese numeral is used. I have encountered no exceptions to this general with respect to temporal nouns.

- (51) bi tɕaŋguŋ si nian sau-wo. N2:018
 1SGNM hired.farm.laborer four year sit-PRF
I served as a hired farm laborer for four years.

In (52), two adjacent borrowed Chinese numerals under ‘ten’ are followed by nian ‘year’ to indicate a specific year.

- (52) bi wu-ə nian-sə
 ISGNM 5-2 year-AB

luŋsuŋ ganbu daŋla-dzi tci-san nian kuru-wo. N2:102
 village cadre serve-SS 7-3 year reach-PRF
I served as village cadre from 1952 to 1973.

Borrowed Chinese numerals always precede borrowed Chinese classifiers or measure words. In (53) the borrowed Chinese numeral wu ‘five’ precedes the borrowed Chinese classifier kuai ‘dollar’. Even though the number is under ten, the borrowed Chinese numeral is still used. The noun baə ‘money’ is a middle Turkic borrowing.

- (53) niə fa-də=ni bi niə kuŋ-sə
 one time-LC=TM ISGNM one person-AB

wu kuai baə la-ji-wo. N2:044
 five MW money borrow-BVS-PRF
One time, I borrowed five dollars from a person.

Two consecutive borrowed Chinese numerals can be placed side-by-side to express an ‘or’ relationship where the exact quantity is unclear. This is illustrated in (54). See also example (43) above for a similar case with Santa numerals. One difference found in (54) below from (43) above is the use of the measure word dan which is necessary after borrowed Chinese numerals.

- (54) ənə lian san dan gadza tari+dziwo. N2:054
 this two three MW field plant.crops+PROG
This [person] plants crops in two or three fields.

Borrowed Chinese numerals are used to express age when it is ten or older as in (55). For a similar example for age below ten with indigenous numerals, see

(42) above. An interesting point is that (55) below follows immediately after (42) above in the same text.

- (55) sisan olu-sə ada=mini duja idziə-wo. N2:012
 thirteen reach-DL papa=1SG-GN world eat-PRF
 When I was thirteen years old, my papa died.

In some lexical items, a borrowed Chinese numeral may not be followed by a measure word or classifier. In sandziə ‘third elder sister’ in example (56) below the borrowed Chinese numeral san ‘three’ is followed by the borrowed kinship term dziə ‘sister’ and is used as a title. The numeral is not used to indicate the quantity of the head noun. sandziə ‘third elder sister’ is used as title in Chinese in the same way. Notice the use of the Santa numeral in gurada ‘third eldest’.

- (56) gura-da-ni-ni san-dziə giə=nə. T2:004
 three-eldest-AC-AS three-sister call=IMP
 The third eldest is called “sandziə” (literally ‘three sister’).

Another example of a borrowed Chinese numeral used in a title without a measure word or classifier following can be found in the place name sisanlin suəiku ‘the 13 Ming Tombs Reservoir’ in which the borrowed Chinese numeral sisan ‘thirteen’ precedes the noun lin ‘tomb’. These place names are all borrowed from Chinese.

(57) pəsa bi baidziŋ daɕia, tɕiŋxua daɕia, sisanlin
 also 1SGNM Beijing university Qinghua university 13.Ming.tombs

ʂuəiku, dʒiŋʂi bowuguan, ʂəudu tɕijiguan dʒi maŋ saŋgwan
 reservoir military.affairs museum capital gymnasium and all visit

gia-dʒi udʒa-wo. N2:108

do-SS see-PRF

I also visited Beijing University, Qinghua University, the 13 Ming Tombs Reservoir, the Military Affairs Museum, and the Capital Gymnasium.

7.2.3 Measure Words and Classifiers

In this section, I will be discussing measure words and classifiers. For more examples and some additional discussion regarding their co-occurrence with numerals, see sections 7.2.2.1 and 7.2.2.2 above.

According to Li and Thompson (1981: 104-5), in Mandarin Chinese classifiers are lexical items that obligatorily accompany a numeral, demonstrative, or certain quantifiers. They are diachronically defined by the semantic class of the noun. When a measure word or classifier is borrowed from Chinese into Santa, this semantic class remains unchanged in Santa.

Santa does not have an indigenous grammatical category of classifier. Santa does, however, have measure words. These are items that follow the numeral and usually define a quantity of the noun. Moreover, they do not obligatorily accompany the numeral like classifiers normally do. Yet there are only a few indigenous lexical items that are used solely as measure words. In other words, they do not occur independently as nouns. A few of these are listed below.⁸⁷

⁸⁷ Measure words are almost always nouns. In some languages, some measure words may be grammaticized into an independent lexical category (Charles N. Li, personal communication).

(58)	piɕiu	‘handful of’
	uɕu	‘load of’
	xəija	‘bunch of, bundle of’ ⁸⁸

Indigenous measure words are adapted from nouns. Some instances are given below.

(59)	aman	‘mouthful’ from ‘mouth’
	hamusa	‘plate full of’ from ‘plate’
	haŋku	‘step’

In example (60), repeated from (37) above, the noun hamusa ‘plate’ is a container that is used as a measure word. In this example hamusa ‘plate’ is a ‘plate full of’ and not a ‘silver plate’. I assume that most nouns that are containers can be used as a measure word in this way.

(60)	“ <u>Gua</u> <u>hamusa</u> <u>miənqu</u> dʒi <u>Gua</u> <u>hamusa</u> <u>anton</u>
	two plate silver and two plate gold

tʃi aɣi-dʒi ətʃi=də dʒaru-lə ətʃi-Ø.” T6:035

2SGNM take-SS go=DQ make.use.of-SP go-IMPR

“Go, you go and take two plates full of silver and the two plates full of gold and make use of it.”

Most of the measure words found in Santa, however, are borrowed from Chinese. Some instances are given below.

(61)	li	‘1/2 kilometer’ (from Chinese <u>lǐ</u>)
	dʒiŋ	‘1/2 kilogram’ (from Chinese <u>jīn</u>)
	ʃəŋ	‘1 liter’ (from Chinese <u>shēng</u>)
	mu	‘0.0667 hectares’ (from Chinese <u>mǔ</u>)

⁸⁸ xəija is actually of unknown origin.

However most of these measure words may occur as head nouns in an NP if the numeral/measure word phrase is not quantifying another noun as in (62) below. In this case, li ‘1/2 kilometer’ is the head noun and is preceded by the borrowed Chinese numeral ši ‘ten’.

- (62) “ta [ši li]^{NP} mo dziəɾə-sə usu idziə+dziwo.” A2:069
 2PLNM ten li road on-AB water eat+PROG
“After you all are on the road for ten li (= 5 kilometers), drink some water.”

Borrowed classifiers from Chinese, although rare, are occasionally found in Santa. A couple of the most common ones are given below.

- (63) giə ‘CLASSIFIER (CL)’ (from Chinese ge)
 tɕiəu ‘CL:for long thin things’ (from Chinese tiáo)

The use of giə ‘CL’, the most common classifier in Chinese, is illustrated in (64) where it accompanies the borrowed Chinese numeral dziusidziu ‘ninty-nine’.

- (64) ənə kuŋ niə udu dziusidziu-giə bari-wo ma, T4:111
 this person one day ninety.nine-CL take-PRF PRT
One day this person caught ninety-nine [sparrows].

Generally, borrowed Chinese classifiers which do not clearly function as measure words as well only follow borrowed Chinese numerals.⁸⁹ This, I believe, is because the structure numeral-classifier is borrowed as an inseparable unit from Chinese rather than the numerals and classifiers being borrowed separately. Nonetheless, examples of borrowed Chinese classifiers which are not clearly measure words following indigenous numerals can be found, although they are

⁸⁹ In Santa, borrowed Chinese classifiers never follow demonstratives or quantifiers as they do in Chinese.

rare. Example (65) shows three parallel clauses where an indigenous numeral precedes a classifier that is not clearly functioning as a measure word. Cases like this are rare, however.

(65) ədə mi-ni ki-də dziəron gandzi gondziliə wo.
 now 1SG-GN house-LC four CL:long.thin quilt have

 ʃini quaitʃəŋ dzi guri tɕiau miandzan wo,
 new old and three CL:long.thin felt.blanket have

guari tɕiaudzi dandzi wo. N2:114-6
 two CL:long.thin cotton.blanket have

Now my house has four quilts, three old and new felt blankets, and two cotton blankets.

The meanings of the classifiers used above are all the same. They are used with nouns that are long and thin; in this particular case quilts, felt blankets, and cotton blankets. But in each clause the choice of classifier is different: gandzi, tɕiau, and tɕiaudzi. Classifiers co-occurring with borrowed Chinese numerals are expected since Chinese numerals and Chinese classifiers are borrowed as inseparable units. What is unusual is that the borrowed Chinese classifiers are co-occurring with indigenous numerals and in one case the noun which is being modified gondziliə ‘quilt’ is indigenous as well. However, the use of classifiers here may simply be explained stylistically due to the parallelism of the clauses and the use of analogy in a prepared published text. (Remember, Santa is not a written language.) The co-occurrence of classifiers with indigenous numerals merits further investigation.

The borrowed measure word kuəi ‘dollar, piece’ always requires the use of Chinese numerals as illustrated below.

(66) si kuai baə~də niə sara lian kuai baə~ni litçien ogi-sə
 ten MW money-DT one month two MW money-AC interest give-DL

tʃu tʃokɔŋ-ni wo. N2:040

SUP few-NM COP.S

For every ten dollars (borrowed), every month there is two dollars interest, this is the least.

In summary, Santa does not have an indigenous grammatical category of classifier. Indigenous measure words, however are common. Borrowed Chinese measure words are common and can be found with indigenous numerals. Borrowed Chinese classifiers do occur but mostly with Chinese numerals. Some cases of borrowed Chinese classifiers with indigenous numerals can be found, but these are rare. Perhaps this is evidence that Santa is in the very early stages of developing a grammatical category of classifier.

7.2.4 Adjectives ⁹⁰

Santa has a distinct grammatical category of *adjective*. Arguments for this are given in section 7.2.4.1. This is followed by a short discussion of word order in section 7.2.4.2. In section 7.2.4.3 there is a detailed discussion of adjectives, followed by a discussion of Dixon's adjectival semantic types in section 7.2.4.4, and a discussion of *property concepts* (Thompson 1988) in Santa in context in section 7.2.4.5. Finally, comparatives are described in section 7.2.4.7 and superlatives in section 7.2.4.8.

7.2.4.1 Arguments for the Grammatical Category 'Adjective' in Santa

What grammatical evidence supports the existence of 'adjective' as a viable grammatical category in Santa? In order to answer this question, it is

⁹⁰ Much of this section was adapted from a talk given at the University of California, Santa Barbara on February 13, 1997, *A Study of Property Concepts in Santa Mongolian*.

necessary to show that adjectives do not pattern like verbs, section 7.2.4.1.1, or nouns, section 7.2.4.1.2. It is also helpful to show that adjectives have properties unique to themselves, section 7.2.4.1.3.

7.2.4.1.1 Compared with Verbs

Santa adjectives share very few properties with verbs. Santa adjectives are unlike verbs in that verbal morphology may not be directly suffixed to an adjective. Adjectives require one of several derivational VAS suffixes in order to take verbal morphology: -tu, -to, -da, -la, -lo, -sa, -si, -lu, -rə, -ra, -ro, -dziə, and -dzə.⁹¹ (These derivational VAS suffixes are discussed in more detail in Chapter 5 in section 5.2.4.) An example of a verb derived from an adjective is given below.

- (67) iŋgiə-sə mutuŋ undu-da-wo. T2:104
 and.so-DL tree tall-VAS-PRF
 And so the tree became tall.

The verb unduda is derived from the adjective undu ‘tall’. The suffix -wo on the verb is the perfective aspect.

There is one exception where I have encountered an adjective apparently taking verbal morphology. This is illustrated below.

- (68) lama goron-la-ni su-dzi aru-ka=də
 lama courtyard-PL-AC sweep-SS clean-CS=DQ

 niə tuʒon takan-ni noʒəi-də idziə-ka-wo. A1:100
 one bowl noodles-AC dog-DT eat-CS-PRF

The lama swept the courtyards clean, and then fed a bowl of noodles to the dog.

⁹¹ Any given adjective may not take every suffix from this list. The choice is for the most part lexically determined, although some adjectives may take more than one suffix.

In this example, the adjective aruŋ ‘clean’ takes the causative suffix -kɑ with the derived meaning ‘to cause to clean’. However, this is an unusual case. Normally, a verb must first be derived, as mentioned above. aru-kɑ is likely a case of lexicalization where the derivational suffix has been lost. This is supported by the fact that Bu He’s (1983) *Dongxiang Language Dictionary* (DLD) gives aru-lu-kɑ as the dictionary entry for ‘to cause to clean, to make clean’ where -lu is the VAS suffix which derives verbs from adjectives. (See Chapter 5, section 5.2.4.8 for more on the derivational VAS suffix -lu.)

It is argued that there is no distinct grammatical category of adjective in Mandarin Chinese, or at least only a very limited one (Thompson 1988). For this reason, Thompson (1988) uses the term *property concepts* in order to refer to them without prejudicing opinions in regard to their grammatical categorization.⁹² Property concepts in Mandarin have primarily intransitive verbal characteristics. This issue is important when we consider borrowed Chinese ‘adjectives’ in Santa. Since adjectives in Chinese display intransitive verbal characteristics, one might expect that borrowed Chinese adjectives in Santa might be required to take a BVS suffix like verbs are required to do, but this is not the case. (See Chapter 5, section 5.2.5.1 for more on BVS suffixes.) In fact, many borrowed adjectives do not require any affixation at all, as can be seen in the examples below.

(69) putuŋ ‘ordinary, common, average’ (from Chinese pǔtōng)

(70) faŋbian ‘convenient’ (from Chinese fāngbiàn)

(71) xotɕi ‘gentle, kind, polite, amiable’ (from Chinese héqǐ)

However, many borrowed adjectives do require affixation. They take the BAS suffix -ni which is a calque of the Chinese marker de. The Chinese marker de has many functions in Chinese. These functions include marking genitives,

⁹² This term covers the semantic types introduced in Dixon (1977) which are dimension, physical property, color, human propensity, age, value, speed, position and the semantic types similarity, difficulty, and qualification introduced in Dixon (1991). These semantic types are discussed in more detail in section 7.2.4.4.

adverbials, relative clauses, and associative phrases in Chinese. Syntactically however, these structures share a common feature — de is suffixed to⁹³ a phrase which precedes the head which it is modifying. When an adjective precedes a head noun in Chinese, it is often followed by de. This phrase is considered to be a relative clause. This is because of the verbal nature of adjectives in Chinese. When de is not used, the phrase is considered to be an attributive adjective (Li & Thompson 1981:116-26). Since in Chinese, adjectives preceding head nouns are frequently followed by de, the Chinese glosses of many of the borrowed Chinese adjectives in the DLD include de. In Santa, the marker de is not borrowed with the Chinese adjectives.⁹⁴ Rather, the indigenous BAS suffix -ni is used instead. This particular use of the calque however has a very limited function, compared to the Chinese marker de. It is only found on borrowed Chinese adjectives. Some examples are given below.

- | | |
|----------------|---|
| (72) fəŋ-ni | ‘square’ (from Chinese <u>fāngde</u>) |
| (73) ɕiə-ni | ‘slanting, inclined, tilted’ (from Chinese <u>xiéde</u>) |
| (74) ʂulian-ni | ‘skilled’ (from Chinese <u>shúliànde</u>) |

To summarize, adjectives in Santa share relatively few features with verbs. They may not take verbal morphology unless they are derived as verbs (1 lexicalized exception). In addition, borrowed Chinese adjectives (which have verbal characteristics in Chinese) do not display any verbal characteristics in Santa. Borrowed Chinese verbs must take a BVS suffix, while borrowed Chinese adjectives do not. Many borrowed Chinese adjectives do require a BAS suffix -ni which is a calque of Chinese de.

⁹³ Or immediately follows.

⁹⁴ See Table 7.16 and Table 7.17 below for a few exceptions.

7.2.4.1.2 Compared to Nouns

Santa adjectives are like nouns in that they are followed by the copula,⁹⁵ when they are used predicatively as in example (75).

- (75) [ənə nokɪən]^{NP} gun wo. T4:017
 this hole deep COP.S
This hole was deep.

In many ways example (75) above is parallel to the Santa equational construction. An example of the latter is given in (76).

- (76) [tʃɪgəŋ moʔəɪ]^{NP1} ʃi [luŋwaŋ-ni kawaŋ]^{NP2} wo. T6:010
 white snake COP.H Dragon.King-GN son COP.S
"The white snake is the Dragon King's son."

In (76) above, the Chinese copula ʃi occurs between NP1 and NP2 in the equational construction.⁹⁶ Its placement in the Santa equational construction is identical to its usage in Chinese. However, in spite of the use of the Chinese copula verb, the Santa copula wo occurs in the sentence-final position. Comparing examples (75) and (76), one might postulate that the adjective gun 'deep' functions as a noun. But example (75) is different from (76) in a very important way. The Chinese copula ʃi may never occur between the first NP and the predicating adjective that follows. This is an important distinction between nouns and adjectives in Santa. For more on this hybrid equational construction see section 8.1.3.1.

In order for an adjective to function as the head of a predicate nominal in the NP2 slot in an equational, the adjective must be nominalized using the suffix -ni. Although this suffix also has the form -ni, its function is different from that of

⁹⁵ Actually, I do not think the use of the copula is strictly obligatory, but my impression is that it occurs more often than not.

⁹⁶ The use of the Chinese copula ʃi is optional in equationals.

the BAS -ni in borrowed adjectives. In (77), the adjective gandzun̄tu ‘sleeved’ is derived from the noun gandzun̄ ‘sleeve’ with the ANS suffix -tu. (For more on the suffix -tu see Chapter 5, section 5.2.6.1.)

- (77) mi-ni ana ʃi xulan̄ gandzun̄-tu-ni wo. T2:044
 ISG-GN mother COP.H red sleeve-ANS-NM COP.S
 My mother is red sleeved. (or the red sleeved one.)

Because this construction is an equational construction, an NP must occur after the borrowed Chinese copula ʃi and before the indigenous copula wo. The phrase xulan̄ gandzun̄tu ‘red sleeved’ is an adjectival phrase. In order for it to serve as a predicate nominal, the nominalizing suffix -ni is obligatory. This construction is very similar to the ‘shì ... de’ construction in Chinese. For more on this construction in Mandarin see Li & Thompson (1981:587-93).

Another way that adjectives are different from nouns is that they, for the most part, cannot take most case morphology. There are some rare exceptions where adjectives take case morphology, but only the case markers -sə ABLATIVE and -də LOCATIVE are found as in the examples below.

- (78) pudza ədzən golo-sə udza-sə niə kuŋ pudza sida+dziwo. A1:128
 bean master far-AB see-DL one person bean pick+PROG
 The bean master from afar sees that there is a person picking beans.

- (79) hə qara-də udu-nə dawa-ka+dziwo. T8:29
 3SG black-LC day-RP pass-CS+PROG
 He was made to pass his days in the dark.

Another way that adjectives are different from nouns is that a noun must be derived in order to function as descriptive attribute of another noun. An example is given below where the derived adjective sakan̄tu ‘bearded’ is modifying the noun laudziga ‘old man’. (For more detail on the ANS suffix -tu see section 5.2.6.1 in Chapter 5 and Table 7.12.) Noun compounds do not require

this morphology, but noun compounds are lexicalized. See section 7.2.6.1 for discussion on noun compounds.

- (80) qara olu=dənə ənə kəwəŋ qari-dzi mo dziərə irə-sə
black become=DQ this boy return-SS road on come-DL

niə tʃigaŋ sakəŋ-tu laudziga tʃudziəkə-wo. T6:007
one white beard-ANS old.man see-PRF

After it became dark, this boy was returning on the road when he saw a white bearded old man.

7.2.4.1.3 Unlike Nouns and Verbs

Adjectives are unlike nouns and verbs in that they take the intensifier suffix -kəŋ. (See Table 7.18). For some more examples with -kəŋ see Table 7.18 and section 7.2.4.7. An example is given below.

- (81) “ta gudzi-kəŋ irə nu?” T2:109
2PLNM fast-INT come QM
“Will you all come faster?”

Adjectives are also unlike nouns and verbs in that adjectives can be modified by the superlative tsu. This is illustrated in (82). For more on superlatives see section 7.2.4.8.

- (82) “tsu andatu wo.” T4:140
most delicious COP.S
“[It] was the most delicious.”

7.2.4.1.4 Summary

In summary, adjectives form a viable grammatical category in Santa. They are unlike verbs in that they cannot take verbal morphology without being

derived and when they are borrowed from Chinese, they do not take a BVS suffix as borrowed Chinese verbs do.

Adjectives borrowed from Chinese are similar to nouns in that they may occur predicatively before the copula verb wo. They are unlike nouns in that the borrowed Chinese copula si can never occur before the adjective in this predicative usage, while it can before a noun. If an adjective occurs as the head of a predicate nominal in an equational construction (after the borrowed Chinese copula si and before Santa copula verb wo) then the adjective must be nominalized. In addition, adjectives normally do not take case morphology, and nouns must be derived in order to function as a descriptive attribute of a noun if it does not form a compound.

Adjectives are different from both verbs and nouns in that they may take the intensifier suffix -kən and superlative marker tsu.

7.2.4.2 Word order of adjectives

Attributive adjectives precede the noun they are modifying. In example (83) mila ‘small’ is modifying the noun kəwan ‘son’.

- (83) “bi si luŋwaŋ-ni mila kəwan wo.” T6:018
 ISGNM COP.H dragon.king-GN small son COP.S
“I am the Dragon King’s younger son.”

Adjectives following the NP are predicative. In example (84) fugia ‘large’ is predicating the NP ənə kəwan ‘this boy’. The copula wo immediately follows the adjective. A similar example is given in (75) above.

- (84) ənə kəwan fugia wo. T5:29
 this boy large COP.S
This boy was large.

7.2.4.2.1 Coordination of adjectives

There are a few strategies for coordinating adjectives. The first strategy is to use the conjunction dzi ‘and’ which is borrowed from Chinese jí between the two predicate adjectives as in the following example.

- (85) ənə usu fugia dzi arun wo. A2:074
this water big and clean COP.S
This water was big and clean.

The next strategy is to use jí after the coordinated attributive adjectives as in (86). Notice that the adjectival phrase occurs before the numeral/classifier phrase. For more on the conjunction dzi in Santa see section 7.2.7.

- (86) sini quaitse dzi guri tciəu miandzəŋ wo. N2:115
new old and three CL felt.blanket have
[Our house] has three new and old felt blankets.

The other strategy, apparently only used with adjectives, makes use of the borrowed lexical item jəu ‘also’ (from Chinese yòu) before a predicate adjective. This construction is borrowed from Chinese and is specifically ‘jəu ADJ jəu ADJ’ as in (87).

- (87) hə jəu oqo jəu biədun wo. T5:12
3SGNM also short also thick COP.S
He was short and thick.

7.2.4.3 Adjectives in Santa

There are approximately 256 adjectives in the Santa.⁹⁷ These are tabulated in Table 7.8 by source language and derivation type. Non-derived adjectives have

⁹⁷ Based on Bu He (1983) *Dongxiang Language Dictionary*. Bu He (1983) classifies 287 lexical entries as adjectives out of a total of 4522. Of these 287, 14 were considered alternate

no derivational morphology of any kind. Derived adjectives have some sort of derivational morphology. Phrasal (or compound) adjectives consist of more than one word.

	Non-derived	Derived ⁹⁸	Phrasal	Totals
a. Santa	71	29	13	113
b. Hui Chinese	66	5	1	72
c. Unknown origin	18	2	0	20
d. Chinese/Santa	0	23	2	25
e. Santa/Unknown	1	5	3	9
f. Unknown/Santa	0	1	4	5
g. Chinese/Unknown	3	1	1	5
h. Turkic-Santa	0	2	0	2
i. Santa Chinese	0	0	2	2
j. Arabic-Santa	0	1	0	1
k. Santa Chinese-Santa	0	0	1	1
k. Unknown Chinese-Santa	0	0	1	1
Total	159	69	28	256

Table 7.8: Adjectives by source language and derivation type

From Table 7.8 we can see that 113 of 256 adjectives or 44% are of purely Santa origin and 72 of 256 adjectives or 28% are of purely Chinese origin. 20 of 256 or 8% are of unknown origin. The remaining 20% are of mixed origin.

Some examples of non-derived adjectives of Santa, Chinese, and of unknown origin are given in Table 7.9, Table 7.10, and Table 7.11 respectively below.

pronunciations, 3 were considered secondary entries, and 14 — all suffixed with -du ‘P.AS’ — have not been included in this total. For more on -du, see section 7.5.2.2.1 in Chapter 7.

⁹⁸ Figures do not include 7 phrasal adjectives with derived elements. These are included in the “Phrasal” column.

	Gloss
xulaŋ	‘red’
naitɕiən	‘wet’
ʂuluŋ	‘honest’
fugiə	‘big’
otɕiau	‘old’
səixəŋ	‘beautiful’

Table 7.9: Non-derived adjectives native to Santa

	Gloss	Chinese source
daxuŋ	‘scarlet’	dàhóng
guəi	‘expensive’	guì
piŋ	‘flat’	píng
zəndzən	‘conscientious’	rènzhēn
today	‘appropriate’	tuǒdàng
fudza	‘complex’	fùzá

Table 7.10: Non-derived adjectives from Chinese sources

	Gloss
ubali	‘poor’
mila	‘small’
gau	‘good’
qosuŋ	‘dry’
doxoŋ	‘ugly’
zan	‘sticky’

Table 7.11: Non-derived adjectives from unknown sources

The most common derivational suffix is -tu ‘ANS’ which derives adjectives from nouns of all origins. Some examples are given in Table 7.12. For more on this suffix see section 5.2.6.1 above.

	Gloss	Source/root	Gloss
Santa root			
sakəŋ-tu	‘bearded’	sakəŋ	‘beard’
giən-tu	‘sick’	giən	‘illness’
Chinese root			
bəŋʃi-tu	‘skillful’	běnsǐ	‘skill, ability’
mɪŋʃəŋ-tu	‘reputable’	míngshēng	‘reputation’
mədzi-tu	‘pock-marked’	mázi	‘pock marks’
Turkic root			
baə-tu	‘rich’	baə	‘money’
taʃi-tu	‘rocky’	taʃi	‘rock’
Arabic root			
áGili-tu	‘intelligent, wise’	áGili	‘wisdom’

Table 7.12: Derived adjectives from nouns using Santa suffix -tu ‘ANS’

The suffix -ra also derives adjectives from nouns. The root nouns are all indigenous and have a common semantic field of bodily fluids and waste. The derived meanings all have negative connotations. For more on -ra see section 5.2.6.2 above.

	Gloss	Source/root	Gloss
ḡəsu-ra	‘of an old urine pit’	ḡəsuŋ	‘urine’
basu-ra	‘shitty’	basuŋ	‘feces’
qawa-ra	‘snotty nosed’	qawa	‘nasal mucus’

Table 7.13: Derived Santa adjectives from nouns with suffix -ra

The suffix -laŋ is the only suffix that derives adjectives from verbs. These are the only two examples in the DLD. For more on -laŋ see section 5.2.8.1 above.

	Gloss	Source/root	Gloss
bajasu-laŋ	‘joyful’	bajasu	‘to be happy’
tṣudu-laŋ	‘full (from eating)’	tṣudu	‘to be full (from eating)’

Table 7.14: Derived adjectives from verbs with suffix -laŋ

The suffix -matṣa is rare, found in only two examples in the DLD. Neither of these adjectives are indigenous and the meanings are a subtype of physical property which is something like position in space. These adjectives also occur with the suffix BAS -ni. For more on -matṣa see section 5.2.10.2 above.

	Gloss	Source/root
Chinese		
çia-matṣa	‘tilted, slanted, inclined’	xié
Unknown origin		
xuai-matṣa	‘horizontal, transverse’	

Table 7.15: Borrowed adjectives with suffix -matṣa

Some Chinese adjectives are borrowed as a single unit along with with the marker de, discussed earlier. The Santa phonetic version of this marker is dzi due

to palatalization. It is interesting to note that all of these adjectives are two-syllable adjectives. These examples are rare and the only five examples found in the DLD are given in Table 7.16.

	Gloss	Chinese source
dzɯŋjau-dʒi	‘important’	zhòngyào-de
fənsan-dʒi	‘scattered’	fēnsàn-de
ijɑŋ-dʒi	‘same’	yīyāng-de
ɕiəntʂəŋ-dʒi	‘ready-made’	xiàrchéng-de
ɕiɑŋsi-dʒi	‘similar’	xiāngsì-de

Table 7.16: Borrowed Chinese adjectives with de

The adjectives in Table 7.17 are all borrowed and take the suffix BAS -ni. As mentioned above, the suffix -ni is indigenous and is a calque of the Chinese marker de. -ni is never used with indigenous adjectives.

	Gloss	Source/root
Chinese		
ʂulian-ni	‘skilled’	shúliàn-de
dʒi-ni	‘straight’	zhí-de
nan-ni	‘difficult’	nàn-də
ɕiɑŋfan-ni	‘opposite’	xiāngfǎn-de
Chinese root with <u>-de</u>		
sudʒi-ni	‘plain (not fancy)’	sù-de
xuadʒi-ni	‘flowery’	huā-de
Unknown origin		
xuai-ni	‘horizontal, transverse’	

Table 7.17: Borrowed adjectives with Santa suffix -ni

There are two exceptional cases where an adjective is borrowed from Chinese with the particle de intact and is affixed with -ni as well: sudzini ‘plain (not fancy)’ and xuadzini ‘flowery’. Interestingly enough, they are close to antonyms. Both of these are listed in Table 7.17 above.

The suffix -kaŋ is an intensifier. Notice that the use of this suffix is not limited to indigenous words. Some more examples are given in section 7.2.4.7.

	Gloss	Source/root	Gloss
Santa			
ʃulu-kaŋ	‘more honest’	ʃuluŋ	‘honest’
xu-pa-la-kaŋ	‘very red’	xulaŋ	‘red’
Chinese			
nandziŋ-kaŋ	‘more quiet’	ānjìng > nandziŋ	‘quiet’
guəi-kaŋ	‘more expensive’	guì > guəi	‘expensive’
Unknown origin			
zən-kaŋ	‘more sticky’	zən	‘sticky’
taŋ-kaŋ	‘slower’	taŋ	‘slow’

Table 7.18: Adjectives with Santa suffix -kaŋ

In Table 7.19 are some phrasal (or compound) adjectives.

	Gloss	Source
Santa		
tʃigəŋ dzoliən	‘credulous’ (lit. ear soft)	
tʃigəŋ quɔduŋ	‘incredulous’ (lit. ear hard)	
doloŋ boʁo-tu tauləi	‘sly’ (lit. seven bottomed rabbit)	
Chinese Unknown		
dandzi mila	‘cowardly’ (lit. courage small)	dǎnzi
Unknown Santa		
gau dzukə-tu	‘good intentioned’ (lit. good hearted)	
Chinese		
xudu nāngan	‘especially capable’	hútú nénggān

Table 7.19: Phrasal (or compound) adjectives

7.2.4.4 Dixon’s adjectival semantic types

In this section I will look at Dixon’s adjectival semantic types and their relationship with the Santa. Dixon (1977) proposed 7 semantic types to cover all the adjectives in the world’s languages; four core types — age, color, dimension, and value — and three others — human propensity, physical property and speed. In a footnote, Dixon (1977) mentions another type, position, which he claims is usually represented by adverbials in the world’s languages, not adjectives. I have included them in my discussion. Dixon (1991) introduces three more semantic types: difficulty, similarity, and qualification. The four core types — age, color, dimension, and value — are claimed to be the semantic types usually represented by those languages that have a closed and sometimes very limited set of adjectives (Dixon 1977).

For description and examples of each semantic type, except *position*, I include an extended quote from Dixon (1991).

1. DIMENSION, e.g. big, great, short, thin, round, narrow, deep.
2. PHYSICAL PROPERTY, e.g. hard, strong, clean, cool, heavy, sweet, fresh, cheap; this includes a CORPOREAL subtype, e.g. well, sick, ill, dead; absent.
3. SPEED-quick, fast, rapid, slow, sudden.
4. AGE-new, old, young, modern.
5. COLOUR, e.g. white, black, red, crimson, mottled, golden.
6. VALUE, e.g. (a) good, bad, lovely, atrocious; (b) odd, strange, curious; necessary, crucial; important; lucky.
7. DIFFICULTY, e.g. easy, difficult, tough, hard, simple.
8. QUALIFICATION, with a number of subtypes:
 - 1(a) DEFINITE, a factual qualification regarding an event, e.g. definite, probable, true;
 - 2(b) POSSIBLE, expressing the speaker's opinion about an event, which is often some potential happening, e.g. possible, impossible;
 - 3(c) USUAL, the speaker's opinion about how predictable some happening is, e.g. usual, normal, common;
 - 4(d) LIKELY, again an opinion, but tending to focus on the subject's potentiality to engineer some happening, e.g. likely, certain;
 - 5(e) SURE, as for (d), but with a stronger focus on the subject's control, e.g. sure;
 - 6(f) CORRECT, e.g. correct, right, wrong, appropriate, sensible. These have two distinct senses, commenting (i) on the, correctness of a fact, similar to (a) (e.g. That the whale is not a fish is right), and (ii) on the correctness of the subject's undertaking some activity (e.g. John was right to resign).
9. HUMAN PROPENSITY, again with a number of subtypes:
 - (a) FOND, with a similar meaning to LIKING verbs ..., e.g. fond (taking preposition of);
 - (b) ANGRY, describing an emotional reaction to some definite happening, e.g. angry (about), jealous (of), mad (about), sad (about);

(c) **HAPPY**, an emotional response to some actual or potential happening, e.g. anxious, keen, happy, thankful, careful, sorry, glad (all taking about); proud, ashamed, afraid (all taking of);

(d) **UNSURE**, the speaker's assessment about some potential event, e.g. certain, sure, unsure (all taking of or about), curious (about);

(e) **EAGER**, with meanings similar to **WANTING** verbs ..., e.g. eager, ready, prepared (all taking for), willing;

(f) **CLEVER**, referring to ability, or an attitude towards social relations with others, e.g. clever, stupid; lucky; kind, cruel; generous.

10. **SIMILARITY**, comparing two things, states or events, e.g. like, unlike (which are the only adjectives to take a direct object); similar (to), different (from) (which introduce the second role-obligatory for an adjective from this type-with a preposition) (Dixon 1991:78-9).

Abbreviations used in the tables below are given in Table 7.20. Core semantic types are preceded by an asterisk. The semantic type position is preceded by a cross-hatch '#' sign indicating it is not one of the types in Dixon (1991).

*Age	A
*Color	C
Difficulty	Df
*Dimension	Dm
Human Propensity	HP
Physical Property	Pp
#Position	Po
Qualification	Q
Similarity	Sm
Speed	Sp
*Value	V

Table 7.20: Dixon's 1991 adjectival semantic types

I classified each of the 256 Santa adjectives for Dixon's semantic types. Some adjectives I gave more than one classification. The results are given in Table 7.21. Borrowed property concepts from Chinese fell mainly in the *physical property* and *human propensity* types and less frequently in the *value*, *qualification*, and *color* types. There were no borrowed property concepts from Chinese in *speed*, *age*, and *position*. Borrowed *color* property concepts are all non-basic. There is only one borrowed Chinese adjective in the *dimension* semantic type in Santa, *qǎ* 'small', which is only used attributively. The 'M' category is for two miscellaneous items that were unclassifiable by Dixon's semantic types.

	PP	HP	V	Po	C	Dm	Q	Sp	Df	A	Sm	M	Totals
a. Santa	49	18	6	4	11	13	2	6	2	3		1	115
b. Chinese	25	23	10		5	1	5		3		3		75
c. Unknown origin	7	6	3	1		1		1		1			20
d. Chinese/Santa	17	4					2		1		1		25
e. Santa/Unknown	5	2	2							1			10
f. Unknown/Santa	6	1						1					8
g. Chinese/Unknown	3	1							1				5
h. Turkic-Santa	2												2
i. Santa Chinese	1	1											2
j. Arabic-Santa		1											1
k. Santa Chinese-Santa												1	1
l. Unknown Chinese-Santa	1												1
Total	116	57	21	19	16	15	9	8	7	5	4	2	265

Table 7.21: Adjectives by source language and Dixon's semantic types

Table 7.22 is a tabulation of non-derived adjectives by Dixon's semantic types. Most of the borrowed property concepts fall in *physical property* and *human propensity*. There are a few in *value*, *qualification*, and *color*.

	PP	HP	V	Po	C	Dm	Q	Sp	Df	A	Sm	M	Totals
a. Santa	35	5	5	2	7	12	2	3	2	2	0	1	76
b. Chinese	23	22	9	0	5	0	5	0	3	0	1	0	68
c. Unknown origin	6	5	3	1	0	1	0	1	0	1	0	0	18
Total	64	32	17	3	12	13	7	4	5	3	1	1	162

Table 7.22: Non-derived adjectives by source language and Dixon's semantic types

An important fact to note in Table 7.22 are the non-derived indigenous core items within a number of semantic types. For *position* the only non-derived core items are wəira 'near' and golo 'far'; for *qualification*, dzo 'authentic' and səŋgiən 'rare'; for *speed*, gudzɪn, gudun 'fast' and udan 'slow'; for *difficulty*, gəira 'easy' and quɪsun 'hard'; and for *age*, ɕini 'new' and otɕiau 'old'. See discussion of *color* terms below.

The following tables, Table 7.23 through Table 7.25 are looking at the different derived adjective types. These tables cover about 62% of the derived adjectives.

In Table 7.23 the suffix ANS -tu is limited to the semantic types *physical property*, *human propensity*, and *age*.

	PP	HP	V	Po	C	Dm	Q	Sp	Df	A	Sm	M	Totals
a. Santa	8									1			9
b. Chinese-Santa	2	3											5
c. Turkic-Santa	2												2
d. Arabic-Santa		1											1
Total	12	4								1			17

Table 7.23: Derived adjectives with -tu 'ANS' by semantic type

In Table 7.24 the suffix BAS -ni which is used only on borrowed property concepts is found mainly in *physical property* types. The two unknown source entries are probably Chinese loans as well.

	PP	HP	V	Po	C	Dm	Q	Sp	Df	A	Sm	M	Totals
a. Chinese-Santa	10	1					2		1		1		15
b. Unknown-Santa	2												2
Total													17

Table 7.24: Derived adjectives with BAS -ni by semantic type

In Table 7.25 the suffix -kan is found mostly in *speed* and *physical property* semantic types. I was surprised that there were no entries in the DLD for dimension or *age* with -kan. This suffix is also used with Chinese loans.

	PP	HP	V	Po	C	Dm	Q	Sp	Df	A	Sm	M	Totals
a. Santa	2	1	1		2			3					9
b. Chinese-Santa	2												2
c. Unknown-Santa	1							1					2
Total	6	1			2			4					13

Table 7.25: Adjectives with -kan by semantic type

In the following tables, Table 7.26 through Table 7.29, I will give all the adjectives for *color*, *value*, *dimension*, and *age*. These are the core semantic types that Dixon (1977) identifies as being present in almost all languages as some limited adjective type.

In Table 7.26, all of the *color* terms are given. Limiting our observations to indigenous vocabulary, we see that Santa fits the proto-typical six color language as described by Berlin and Kay (1969), except for the addition of the term boro 'grey'. Notice that the next term up on Berlin and Kay's color hierarchy is 'brown', and that this and many of the other non-basic color terms are borrowed

from Chinese. A discussion of the infix -pa- ~ -pu- found in the terms xupalakaŋ ‘very red’ and şıparaŋ ‘yellow-orange’ can be found in section 5.2.9.1 above.

Entry	Gloss	Source language	Source word
qara	black	Santa	
tşıgaŋ	white	Santa	
xulaŋ	red	Santa	
şıra	yellow	Santa	
noŋoŋ	green	Santa	
kugiə	blue	Santa	
boro	grey	Santa	
xupalakaŋ	very red	Santa	
şıparaŋ	yellow-orange	Santa	
qara noŋoŋ	dark green	Santa	
şıra noŋoŋ	light green	Santa	
dzunşə	brown	Chinese	zōngsè
fəŋxuŋ	pink	Chinese	fěnhóng
daxuŋ	scarlet	Chinese	dàhóng
dzixuŋ	purplish red	Chinese	zìhóng
toşə	light tan	Chinese	tuósè

Table 7.26: Color

In Table 7.27, all of the adjectives of *value* are given. Notice the large number of borrowed adjectives of *value* from Chinese.

Entry	Gloss	Source language	Source word
gau	good	Unknown	
mau	bad	Santa	
səikarŋ	beautiful	Santa	
doxorŋ	bad, ugly	Unknown	
andatu	delicious	Santa	
bəliən	unrewarding	Santa	
tʃigara	urgent	Santa	
ubali	poor, pitiful	Unknown	
andaturarŋ	more delicious	Santa	
mauɕiən	bad, broken	Santa-Unknown	
bəliən bəsəri	in vain	Santa Unknown	
dzuŋjaudzi	important	Chinese	zhòngyàode
fərŋbian	convenient	Chinese	fāngbiàn
futarŋ	comfortable	Chinese	shūtan
təbiə	special	Chinese	tèbié
today	safe	Chinese	tuǒdàng
taipirŋ	peaceful	Chinese	tàipíng
dandzin	dangerous	Chinese	dāngjǐn
wəiɕiən	dangerous	Chinese	wēixiǎn
xərŋ	good	Chinese	hěn
ɕixan	strange, curious	Chinese	xīhan

Table 7.27: Value

In Table 7.28 are all the adjectives of *dimension*. There is only one of unknown origin, mila ‘small’ and only one from Chinese. They are listed in antonym pairs except for ‘small’ which has both mila and ga and ‘thick’ which has both biəduŋ and dzudzarŋ. ga ‘small’ can only be used attributively.

Entry	Gloss	Source language
fugia	big	Santa
mila	small	Unknown
ga	small	Chinese
oqo	short	Santa
undu	tall	Santa
gun	deep	Santa
ɕɪŋkiən	shallow	Santa
bokoni	short, low	Santa
fudu	long	Santa
taɽuŋ	fat, plump	Santa
naɽuŋ	thin, slender	Santa
axuæi	wide, broad	Santa
waitaŋ	narrow	Santa
biæduŋ	wide, thick	Santa
dzɔdzɔŋ	thick	Santa

Table 7.28: Dimension

In Table 7.29 are all the adjectives of the semantic type *age*. There are two core adjectives, ɕini ‘new’ and otɕiau ‘old’, and two adjectives derived from nasuŋ ‘age’. xaixuŋ ‘young, childish’ is probably a borrowing from Chinese.

Entry	Gloss	Source language
ɕini	new	Santa
otɕiau	old	Santa
nasutu	... years old	Santa
nasudzaxaŋ	young	Santa/Unknown
xaixuŋ	young, childish	Unknown

Table 7.29: Age

7.2.4.4.1 Summary

To summarize, Dixon's adjectival semantic types revealed that 66% of the non-derived adjectives that were borrowed (including adjectives of unknown origin) were either of the the *physical property* or *human propensity* semantic type. (See Table 7.22.) In addition, many of the borrowed adjectives that have been derived are of the *physical property* or *human propensity* semantic type as well. (See Table 7.23 and Table 7.24.) I do not currently know why this is so, but it warrants further investigation.⁹⁹

Dixon's semantic types also revealed that the semantic types *dimension*, *speed*, *age*, and *position* were resistant to borrowing. (See Table 7.21.) Dixon's semantic types were also useful for isolating non-derived indigenous core adjectives. (See discussion following Table 7.22 above.)

7.2.4.5 Santa property concepts in context: A look at Santa folktales and narratives

In this section I will look at property concepts in some Santa folktales and narratives. The data are listed in Table 7.30 by sentence and speech event type.

⁹⁹ It should be noted that in Santa as a whole, 65% of the adjectives are of the *physical property* and *human propensity* semantic types. See Table 7.21.

Text	IUs	Sentence	Type
BH	40	13	UN
MC	339	150 est.	UN
MP	85	41	UF
A1		149	PF
F05		26	PF
F06		75	PF
F07		58	PF
F08		54	PF
F11		54	PF
F13		10	PF
T2		141	PF
T4		151	PF
T5		89	PF
T6		141	PF
T8		29	PF
Total		1032	

Table 7.30: Sentences by text/speech event type

The first three texts, BH, MC, and MP, are my own data, collected in China from different Santa consultants. They are all basically unplanned (U) speech events. The first two are narratives (N) and the last one is a folktale (F). The other folktales are from published sources, A Ibrahim (1987), Bu He (1987) and Todaeva (1961). Santa is not a written language. The published folktale material is considered in the genre of planned speech (P). The folktale (F) data are narrative in style, but differ from the narrative (N) data in their story-like structure and stretches of quoted speech, not found in any of the narratives.

The total number of sentences that I examined is estimated at 1032. Sentences by speech event and genre are given in Table 7.31.

	Folktales	Narratives
Planned	828	0
Unplanned	41	163

Table 7.31: Sentences by speech event type and genre

This section differs from the previous one in that I am looking at all the property concepts present in these texts and not just those items considered to be adjectives. I considered property concepts in these texts to be an lexical item the encoded one of Dixon's semantic types, discussed above.¹⁰⁰ I coded everything that appeared to be a property concept including verbs.

One of my objectives in this section is to see if the function of property concepts in Santa correlate with Thompson (1988). According to Thompson (1988), 'Property Concept Words (as exemplified in English and Mandarin) function in spontaneous, natural conversational discourse (i) to predicate a property of an established discourse referent or (ii) to introduce a new discourse referent (Thompson 1988:180).'

I coded the following properties in Table 7.32 for each property concept. For some of these properties, I coded the associated noun, not the property concept itself. These properties were grammatical/semantic role, definite/indefinite, and new/given/accessible.

¹⁰⁰ I did not code for the semantic type position, which Dixon considers peripheral.

Part of Speech
Predicative/Attributive
Grammatical/Semantic Role (S, A, O)
Definite/Indefinite
New/Given/Accessible
Dixon Semantic Types
Indigenous/Borrowed
Derived/Non-derived
Verb Derived from Adjective

Table 7.32: Coding

Table 7.33 shows property concepts by tokens and types and their source language. The main thing of interest here is the percentage of borrowed items used to indigenous items. Table 7.8 above shows that at least 44% of the adjective inventory is indigenous. In natural language use, this short study shows that 67% of tokens and 60% of types used are indigenous.

	Indigenous	Unknown	Borrowed	Total
Tokens	127	38	25	190
Types	40	17	11	67

Table 7.33: Property concept types and tokens in 1032 clauses by source

One of the distinctions I will look at next is the attributive versus predicative use of adjectives. A short discription of these uses follows. In Santa and many other languages, a grammatical adjective may occur either attributively or predicatively. An attributive usage is given in (88) where mila 'small' is modifying kəwəŋ 'son'. Attributive adjectives always precede the head noun in Santa.

- (88) “bi ʃi luŋwaŋ-ni mila kəwaŋ wo.” T6:018
 ISGNM COP.H dragon.king-GN small son COP.S
“I am the Dragon King’s younger son.”

In (89) is a predicative usage of the same adjective mila ‘small’ where it predicates the NP tʃi dandzi literally ‘your gall bladder’, idiomatically ‘your courage’.¹⁰¹ The Santa copula follows the adjective when it is used predicatively.

- (89) “tʃi dandzi tai mila wo.” F06:09
 2SGNM gall.bladder too small COP.S
“Your courage is too small.”

There is one adjective in Santa that is not used predicatively, qa ‘small’, a Chinese loan. An example with qa ‘small’ used attributively is given below.

- (90) dau niə qa kuəitsəŋ wo. MC:239
 still one small custom EXST
There is still one small custom.

In addition to these attributive and predicative uses of adjectives, property concepts can be realized as predicates well, even though they are not adjectives. In (91), milatu is a verb derived from mila, an adjective.

- (91) iŋgiə-sə moran mila-tu-wo. T2:085
 and.so-DL river small-VAS-PRF
And so the river became small.

Of the 190 property concepts identified, 13 of them functioned neither as predicates nor attributes as they were grammatically realized as adverbs, nouns, or

¹⁰¹ Lexically, this phrase is a calque of a Chinese idiomatic expression. Both dandzi and tai are Chinese borrowings. However, the Santa syntax here has not been influenced and is normal.

nouns taking the ablative and locative markers mentioned earlier. A tabulation of their grammatical realization is given in Table 7.34.

Attributive or Predicative		Not Attributive or Predicative	
Adjectives	95	Adverbs	5
Verbs	81	Nouns	5
Nominalized Verb	1	Postposition	3
Total	177		13

Table 7.34: Grammatical realization of property concepts

Of the 177 property concepts that were realized as attributes or predicates, 55 of these were attributive and 122 of these were predicative. In other words, 69% of the property concepts in these texts were realized as predicates. These results are shown in Table 7.35.

	Attributive	Predicative	Total
Verbs	0	81	81
Adjectives	54	41	95
Nominalized Verb	1	0	1
Total	55	122	177

Table 7.35: Attributive and predicative property concepts by part of speech

Table 7.35 also breaks down these 177 property concepts by part of speech. A large portion of the the property concepts that were realized as predicates in these texts were grammatically verbs taking some sort of verbal morphology. 81 of 123 predicates or 66% were realized as verbs. Of these 81, 27 were verbs derived from adjectives. (See example (91) above.) That means 54 of 177 or 31% of the property concepts considered here are lexically non-derived verbs. If the verbal realization of property concepts in these texts is for the moment ignored, then the distribution of attributive and predicative (non-verbal) property concepts is 57% and 43% respectively.

Table 7.36 tabulates the grammatical/semantic role of the noun which the property concept is associated with (modifying) in the attributive sense and what NP the property concept is predicating in the predicative sense. The attributive property concepts equally modify S, O, and the second NP in an equational construction. These three ‘slots’ are normally used to introduce new referents, so this finding is expected. Whenever the property concept is used predicatively, all 122 instances predicate an S. These include 8 cases where the causative suffix was used with an intransitive verb.

	Attributive	Predicative
Adjectives		
S	10	41
O	10	
Equational NP2	10	
Oblique-Locative	6	
A	5	
NP of Existential	4	
Oblique-Instrumental	4	
Equational NP1	4	
Middle	2	
Verbs		
S		73
S (Causative)		8

Table 7.36: Attributive and predicative property concepts by grammatical/semantic role

Table 7.37 shows the 177 attributive and predicative property concepts by Dixon’s semantic types. The ‘M’ category is a miscellaneous category for property concepts that were difficult to categorize according to Dixon’s types.

Dixon's Types	Attributive	Predicative	Total
HP	2	49	51
PP	13	28	41
Dm	11	22	33
V	11	19	30
C	14	0	14
A	4	0	4
M	0	4	4
Q			0
Sp			0
Sm			0
Df			0
Total	55	122	177

Table 7.37: Attributive and predicative property concepts by Dixon's types

The most interesting fact that can be drawn from Table 7.37 is found in the distribution of the human propensity semantic type. Of the 51 instances identified, 49 of these were realized as predicates. 47 of the 49 are verbs. Of the 57 human propensity adjectives identified as such in the Santa lexicon, only 2 instances occur in the texts and both these occur predicatively: şidzan 'intelligent' and şiçin 'sincere'. Furthermore, the two instances of the human propensity type which are used attributively are both derived, one from a verb and one from a noun.

Of the 22 instances of dimension property concepts that occur predicatively, 10 of these are derived from adjectives.

In Table 7.38 I have listed the attributive and predicative property concepts by definiteness of discourse referent.

	Attributive	Predicative	Total
Indefinite	32	2	34
Definite	23	120	143

Table 7.38: Attributive and predicative property concepts by definiteness of associated noun

Table 7.38 shows 32 cases of indefinite attributive property concepts, most of which are new. This is the *referent introduction* function mentioned in Thompson (1988) above. There are 120 cases of property concepts predicating definite NPs. This is the *predicating of an established discourse referent* function, mentioned in Thompson (1988) above. This distribution is expected, if not predicted, by Thompson (1988).

The following example shows one of the two exceptional indefinite NPs that were predicated with a property concept. Note that the NP in T8:09 of example (92) below, niə səikən ɕiən ‘a beautiful tail’ has been previously mentioned in T8:02, six clauses earlier. But from the speaker’s perspective, the zokor, the referent is new. Therefore, this is a case of an unestablished discourse referent, from the zokor’s perspective, being predicated.

- (92) xoxodəu-də niə səikən ɕiən wo. T8:02
vole-LC one beautiful tail have.
The vole had a beautiful tail.

... (6 clauses omitted) [Story line: The zokor is thinking to himself, considering the vole’s tail, after having dust blown in his eyes.]

- “niə səikən ɕiən bi-sə giəduren ɡau wo.” T8:09
one beautiful tail COP.S-DL how.much good COP.S
“A beautiful tail would be much better.”

Eventually the zokor is swindled into trading his eyes for the vole’s tail and he becomes blind.

Table 7.39 shows attributive and predicative property concepts by activation cost.

	Attributive	Predicative	Total
New	28	8	36
Given/Accessible	27	114	141

Table 7.39: Attributive and predicative property concepts by activation cost of discourse referent

In Table 7.39 there are 28 cases of attributives modifying new NPs (*referent introduction*) and 114 cases of property concepts predicating given or accessible NPs (*predication of an established discourse referent*). Again, this distribution is expected from Thompson (1988). However, there are 8 instances of new referents being predicated (see example (92) above), and 27 instances of attributives modifying established discourse referents. This is not expected.

Example (93) is a counter-example to Thompson (1988) and shows a new referent ənə jawudan ‘this walking style’ that is being predicated by gau ‘good’. Notice that although the referent is apparently new (it is its first mention), it is treated as definite by the speaker.¹⁰² For examples of attributives modifying established discourse referents, see extended examples (94) and (95).

- (93) “galadzi-ni ənə jawu-dan bəlia gau.” MP:9-11
 pheasant-GN this walking-style extremely good
 “This walking style of the pheasant is extremely good.”

From the results of Table 7.38 and Table 7.39 above, it appears that property concepts are being used for something more than just referent introduction and the predication of established discourse referents. I would

¹⁰² One interpretation is to treat the NP as accessible if one accepts the pheasant’s walking style to be general shared knowledge.

suggest that property concepts are being used for *referent tracking* in these texts. Example (94) on the following pages is an excerpt from A Ibrahim's (1987) text ga sundzi 'The small grandson'. In my discussion of this text that follows, I will refer to clauses by the *text:clause number* tag that follows each clause.

(94) ənə kəwəŋ lama-ni əri-dzi olu+sənu
 this boy lama-AC find-SS can+DM

⇒ niə bajan kuŋ-ni pudza gadza dziəɾə ətʃi-wo. A1:124
 one rich person-AC bean field on go-PRF

As soon as the boy was able to find the lama's body, he pulled him onto a rich person's bean field.

... (3 clauses omitted)[Story line: He makes him lean on a walking stick in one hand, and in the other hand, he makes him carry a basket, and stands him up in the middle of the field. And he himself hides in the field.]

⇒ pudza ədzan Golo-sə udza-sə niə kuŋ pudza sida+dzɪwo. A1:128
 bean master far-AB see-DL one person bean pick+PROG
The bean master sees from afar that there is a person picking beans.

təimən-sə quɾi giə-dzi warada-sə ənə kəwəŋ uliə quɾi=nə A1:129
 that.side-AB go.out do-SS cry.out-DL this boy I.NEG go.out=IMP
From the other side[the bean master] cried, "Get out!", the boy replied, "No!".

giə-dzi kiəlɪə=nə. A1:130
 do-SS say=IMP

⇒ ingiə-sə ənə bajan kun niə taʃi əxu-sə tɕiauruŋ dʒiəɾə
and.so this rich person one rock strike-DL head on

nau-ka+dʒiwo, A1:131

hit-CS+PROG

And so this rich person strikes the man on the head with a rock,

əxu una-ka+dʒiwo. A1:132

strike collapse-CS+PROG

and he collapses.

⇒ pudza ədʒən dawa-dʒi irə niə udzə-sə kuŋ-ni
bean master pass-SS come one see-DL person-AC

əxu ala+dʒiwo. A1:133

strike kill+PROG

The bean master passes by and sees the person he struck has been killed.

ingiə-sən-də gadʒa-də niu-sən kəwaŋ qudzə=dənə
and.so-P.NM-LC field-LC hide-P.NM boy come.out=DQ

oruŋ-ni jəjə-ji əxu ala-wo A1:134

self-GN grandfather-AC strike kill-PRF

At this the boy that is hiding comes out crying that it was his grandfather that was killed.

giə-dʒi wəila=nə. A1:135

do-SS cry=IMP

⇒ ingiə-sə ənə bajan kun dʒin-da-wo, A1:136

and.so-DL this rich person terrified-VAS-PRF

And so this rich person was terrified,

kəwəŋ-də kiəliə, A1:137

boy-DT say
and said to the boy:

“tʃi bu wəila, A1:138

2SGNM IMPR.NEG cry
“Don’t cry,

jəjə-də=tʃi-ni bi bæə pəi-ji-jə. A1:139

grandfather-BN=2SG-GN 1SGNM money compensate-BVS-DES
I intend to compensate you for your grandfather.”

In A1:124 niə bajan kun ‘a rich person’ is the first mention of this referent. This referent is a new/indefinite NP with an attributive property concept bajan ‘rich’. This is an example of referent introduction and the initial use of the adjective here is not exceptional. In A1:128, four clauses later, the referent is rementioned, but this time a new name pudza ədzən ‘bean master’ has been applied to him. The next mention of the referent is in A1:131 where the attributive adjective bajan ‘rich’ is once again used to modify the noun which is now definite and given. The use of the property concept in this case is unusual according to Thompson (1988) because it is an attributive adjective modifying a given NP, thus this is not a case of *referent introduction*. The function of adjective here is apparently to *reidentify* the referent. Remember that the previous mention of this referent introduced a different name, pudza ədzən ‘bean master’. The next mention of the referent is in A1:133, and again, pudza ədzən ‘bean master’ is used to identify the referent. The last mention of the referent is in A1:136 where yet again the attributive property concept bajan ‘rich’ is used to modify the noun and to apparently once more *reidentify* the referent. One argument against the referent tracking or reidentification approach is that the noun kun ‘person’ is semantically empty so that the property concept is carrying all the weight of identification. Another argument is that bajan kun ‘rich person’ is functioning as a name, and thus is a lexicalized expression. One problem with this latter

approach though, is that any adjective could be used in this slot to name the referent. It would seem then that the naming or reidentification function is a productive and normative use of adjectives. The function of the property concept bajan ‘rich’ in these examples is neither one of *referent introduction* nor of *predicating an established discourse referent*. The property concept is being used to track the referent; whether this tracking is done by naming or reidentification, it is a function of adjectives not previously recognized in Thompson’s (1988) conversational data.

In (95) is an excerpt from Todaeva’s (1961) nokɪ mauʁ ɣuala, ‘The dog and cat.’

(95) niə udu-də=ni ənə kəwəŋ ula-də ətʃi-sə
 one day-LC=TM this boy mountain-LC go-DL

⇒ niə qara mokəi niə tsigan mokəi ɣuala əkʷu-ndu+dʒiwo. T6:004
 one black snake one white snake two beat-R/C+PROG

One day, as the boy was going up the mountain, a black snake and a white snake were beating each other.

... (4 clauses omitted) [Story line: He uses a stick to stop them from fighting and they go off. Then the boy meets a white bearded old man who says to him, ...]

“ənə udu tʃi sida-ka-sən ɣua mokəi ʃi
 this day 2SG break-CS-P.NM two snake COP.H

⇒ qara mokəi ʃi jaɣuəi wo, T6:009
 black snake COP.H demon COP.S

Today, you broke apart two snakes and the black snake was a demon.

⇒ tsigan mokəi ʃi luŋwəŋ-ni kəwəŋ wo.” T6:010
 white snake COP.H Dragon.King-GN son COP.S

The white snake is the Dragon King’s son.

The first mention of the black and white snake is in T6:004. In both cases the NPs are new and indefinite, therefore the use of the color property concepts here is a function of referent introduction.¹⁰³ The next mention of the ‘black snake’ is five clauses later in T6:009. The property concept qara ‘black’ is used again to modify the full lexical mention of mokəi ‘snake’ which is now definite and given.¹⁰⁴ This full lexical mention of the noun is exceptional in that the noun is not reduced or completely left understood where the translation would be something like the ‘black one’. The same is true in T6:010 where the property concept tsigan ‘white’ is used again with the full lexical noun mokəi ‘snake’. Both of these uses of property concepts in T6:009 and T6:010 are similar to those mentioned in the previous text where the use of the property concept functions to reidentify or name the referent. It is clear here the the weight of identification is borne by the property concepts qara ‘black’ and tsigan ‘white’ since the noun is the same, but the noun mokəi ‘snake’ is mentioned in full both times as well.

In my opinion, the use of the adjectives qara ‘black’ and tsigan ‘white’ in this text is not unusual. The weight of identification clearly rests with the adjectives. My point is that this is a common use of adjectives in Santa, and that their function here is to track referents by naming or reidentification.

The data that Thompson’s two functions for property concepts, *referent introduction* and *predication of an established discourse referent*, were drawn from is ‘spontaneous, natural conversational discourse (1988:180)’. Only a small portion of the Santa data that my study concentrated on can be considered spontaneous. Only 205 of the 1032 clauses (see Table 7.31 above) can be considered as such. In addition, none of this data is natural conversation. Although there is some conversation within the folktales, this conversation is

¹⁰³ I also considered both of these NPs to be in the middle voice, see Table 7.36 above, since neither seem to be full A since they are fighting each other.

¹⁰⁴ I must admit that the first use of the Chinese copula si in T6:009 is a puzzle to me. It may be similar to the double use of the copula in the English structure, “The fact is is that ...”

planned. Therefore it is not surprising that looking at a different genre type would yield another function of property concepts, that of naming or reidentification.

7.2.4.6 Summary

In this portion of this chapter, I have looked at Santa adjectives and property concepts in depth. First, I claimed that Santa does have a grammatical category of adjective which is supported by grammatical evidence. Adjectives behave like neither nouns nor verbs and have unique properties as well. Secondly, I looked at Santa adjectives and broke them down by source language and whether they were derived or non-derived. I then spent some time looking at the different methods employed for deriving adjectives. Thirdly, I employed Dixon's adjectival semantic types explicated in Dixon (1977) and (1991). This revealed some interesting patterns in borrowing and adjectival derivation. Finally, I looked at all the property concepts (Thompson 1988) in some Santa folktales and narratives. This short study revealed that many property concepts, especially Dixon's human propensity type, are grammatically realized as intransitive verbs. Looking at only the grammatical adjectives in these texts, attributive adjectives occurred 57% of the time and predicative adjectives 43%. Functionally, property concepts in Santa were not limited to *referent introduction* nor the *predication of established discourse referents* as described by Thompson (1988). Cases were found where property concepts were used to predicate non-established discourse referents, examples (92) and (93) above, and to name or reidentify referents.

7.2.4.7 Comparatives

The suffix -kan is suffixed to adjectives as an intensifier. Some examples are given below. These are lexical representations of the comparative degree.

(100) ʃi kuai baə-də niə sara lian kuai baə-ni litɕiən oɡi-sə
 ten dollar money-DT one month two dollar money-GN interest give-DL

tsu tsokon-ni wo. N2:040

SUP little-NM COP.S

For ten dollars, two dollars interest per month is the least.

The most intriguing fact is that the superlative adverb tsu does not need to immediately precede the adjective it is modifying. This is illustrated in (101) where noun kun ‘people’ intercedes between the superlative adverb tsu and the adjective xən ‘formidable’. However, constructions of this type are very rare.

(101) “xai! tsu kun xən wo.” F07:08

hey SUP person formidable COP.S

“Hey! People are the most formidable.”

7.2.5 Personal pronouns

The personal pronoun system in Santa consists of first, second, and third person forms with obligatory number marking.¹⁰⁶ The first person plural form is subdivided into inclusive and exclusive forms. The inclusive form includes the addressee while the exclusive form excludes the addressee. According to Binnick (1987) the inclusive/exclusive distinction is an original trait of the Mongolic language family, but for the most part is not distinguished in the modern languages with only Dagur and Moghol¹⁰⁷ retaining this distinction.¹⁰⁸ However, Santa has clearly maintained the inclusive/exclusive distinction as well. A list of the Santa personal pronouns in the nominative case are given in Table 7.40.

¹⁰⁶ Number marking is not obligatory on nouns.

¹⁰⁷ Moghol is spoken in Afghanistan. The number of speakers is unknown.

¹⁰⁸ According to Menges, the inclusive/exclusives distinction is ‘lacking in Turkic completely (Menges 1968:121).’ However, he does mention that Tuva has retained this distinction due to influence from the Tungus or Mongolic languages (Menges 1968:140).

	Nominative
1SG	bi
2SG	tʃi
3SG	hə
3SG	tərə
1PLEX	bidʒiən
IPLIN	matəŋ
2PL	ta
3PL	həla
3PL	tərəsila

Table 7.40: Personal pronouns in the nominative case

Notice in Table 7.40 that there are two third person pronouns, hə and tərə. hə is clearly related to the demonstrative hə ‘that’ and may be a more recent innovation than tərə. This warrants further investigation. həsila is yet another third plural form. The suffix -si that precedes the plural marker is found only in nominals with the feature [+human]. Other examples are kəwasila ‘children, sons, boys’ and otʃisila ‘daughters, girls’.¹⁰⁹ The plural form of the first plural exclusive pronoun bidʒiən is apparently based on the first person pronoun bi. However, the ending -dʒiən is not found on any other noun or pronoun in Santa.

The accusative/genitive forms of the personal pronouns are homophonous. They either take the marker -ni or its variant -ji. The forms -ni and -ji are in free variation and are not predictable. However, -ji seems to occur more often in fast speech situations. Only the -ni forms are given in Table 7.41.¹¹⁰

¹⁰⁹ There is another third person singular pronoun which is quite rare, əxən and its third person plural counterpart əxəsila.

¹¹⁰ The form tərəsilani, omitted from Table 7.41, is not attested in any of my texts.

	Accusative/Genitive
1SG	mini
2SG	tʃini
3SG	həni
3SG	tərəni
1PLEX	bidziənni
IPLIN	matəŋni, mani
2PL	tani
3PL	həlani

Table 7.41: Personal pronouns in the accusative/genitive case

In Table 7.41, the only morphological differences with the nominative forms are the first person singular pronoun whose root is mi, not bi and the shortened form of the first person plural inclusive pronoun mani.

The dative/locative/benefactive forms of the personal pronouns are homophonous and are given in Table 7.42.¹¹¹

	Dative/Locative/Benefactive
1SG	namadə, madə
2SG	tʃimadə
3SG	həndə
3SG	tərədə
1PLEX	bidziəndə
IPLIN	matəŋdə
2PL	tandə
3PL	hələdə

Table 7.42: Personal pronouns in the dative/locative/benefactive case

¹¹¹ The form tərsiladə, omitted from Table 7.42, is not attested in any of my texts.

In Table 7.42, many roots have undergone morphological changes. The first person singular root is nama or the shortened form ma. The second person singular root is tsima and the third person singular root is han.¹¹² The second person plural root is tan. The roots which are found in dative/locative/benefactive forms also serve as roots for the personal pronouns when they appear in the ablative -sa and comitative -la case and are not listed here for that reason.

Another pronominal form that is common in Santa is guala which is based on the numeral gua ‘two’ and probably the comitative case marker -la lexicalized to -la. This form can stand alone as a pronoun as shown in (102) where guala refers to ənə oçtinla ‘these daughters’ mentioned in the previous clause. We know from the previous context that there are two.

- (102) ənə oçtin-la qa-sə anda-ka=dənə niə giəkuŋ-ni niə tɕaxu
 this daughter-PL hand-AB untie-CS=DQ one rooster-AC one teapot

usu-ni baŋ-la-wo. ingiə=dənə guala xolu-wo. T2:076-7
 water-AC tie.up-BVS-PRF and.so=DQ two run-PRF

After these daughters untied their hands, they tied up a rooster and a teapot of water. After this, the two of them ran (away).

It can also be used following a plural pronoun to limit or specify the number as exactly two. An example of this is given in (103) where guala is used with matan, the first plural inclusive pronoun.

- (103) “matan guala hantu jawu-jə.” T2:026
 1PLINNM two together walk-DES
“We two will walk together.”

¹¹² In addition to being used as a personal pronoun, handə is often used as a locative pronoun meaning ‘there’ along with its counterpart ənandə ‘here’.

7.2.6 Nouns

In this section I will discuss nouns and the different inflections they may take. Nouns are inflected for the following categories: number, possession, reflexive/possessive, unstressed temporal -ni, and case. Nouns may also occur uninflected. These are discussed in section 7.3.2. Before moving on though, I want to briefly discuss compound nouns in the next section.

7.2.6.1 Compound nouns

Nominal compounds may be formed in Santa from separate nouns. Some examples of compounds created from indigenous nouns are shown in (104) through (108).

- (104) xulasuŋ mutuŋ ‘poplar tree’
(from xulasuŋ ‘poplar’ and mutuŋ ‘tree’)
- (105) tʃidzə dʒukə ‘stamen, pistil (of a flower)’
(from tʃidzə ‘flower’ and dʒukə ‘heart’)
- (106) kuŋ aɣidaŋ ‘behavior, lifestyle’
(from kuŋ ‘person’ and aɣi ‘to take’ + -daŋ ‘style’)
- (107) mutuŋ arasuŋ ‘bark’
(from mutuŋ ‘tree’ and arasuŋ ‘skin’)
- (108) unasan xoduŋ ‘meteor, shooting star’
(from una ‘to fall down’ + -san ‘P.NM’ and xoduŋ ‘star’)

Example (106) is formed from a OV compound kuŋ aɣi ‘to live’ with the derivational suffix -daŋ ‘style’ which derives nouns from verbs. In (108), unasan is a nominalized verb from una ‘to fall down’ using the perfective nominalizer -san.

Nominal compounds may also be formed from elements that are not nouns, as shown in the examples below.

- (109) boro giəran 'dawn, daybreak'
(from boro 'grey' and giəran 'bright, shiny')
- (110) fudu oqo 'length'
(from fudu 'long' and oqo 'short')
- (111) xulaŋ tʃidzə 'safflower'
(from xulaŋ 'red' and tʃidzə 'flower')
- (112) giəntu kuŋ 'patient, sick person'
(from giəntu 'sickness, illness' + -tu 'ANS' and kuŋ 'person')

In example (109), the compound boro giəran 'dawn, daybreak' consists of two adjectives. The same is true for fudu oqo 'length' in (110). xulaŋ tʃidzə 'safflower' in (111) consists of an adjective and a noun and giəntu kuŋ 'patient, sick person' in (112) consists of an adjective derived from a noun and another noun.

Compounds can also consist of borrowings. Within the same compound, the sources may originate from different languages. Some examples are given below.

- (113) tʃidzə zəndzi 'stamen, pistil (of a flower)'
(from Santa tʃidzə 'flower' and Chinese ránqǐ 'interior of some things')
- (114) mau duŋci 'bogy, demon, monster'
(from Santa mau 'bad' and Chinese dōngxi 'thing')
- (115) ciŋtci ji 'Monday'
(from Chinese xīngqī 'week' and Chinese yī 'one')
- (116) muaŋ goni 'ewe (sheep)'
(from Chinese mǔyáng 'ewe' (lit. *female sheep*) and Santa goni 'sheep')
- (117) məŋja siɖuŋ 'incisor'
(from Chinese ményá 'incisor' (lit. *gate tooth*) and Santa siɖuŋ 'tooth')

- (118) xoši taši 'flint'
 (from Chinese huǒshí 'flint' (lit. *fire stone*) and Turkic taši 'stone, rock')

Example (113), tsidzə zandzi 'stamen, pistil (of a flower)' consists of a Santa noun and a Chinese loan. What is interesting is that there is an indigenous compound for the same word, tsidzə dzukə given in (105) above. Example (114), mau duŋçi 'bogy, demon, monster' consists of adjective and a Chinese noun. This example is interesting because there is a Santa noun of unknown origin (but obviously not Chinese), mausuməkətši, and a Chinese loan, jauguai (from yāoguài), that mean the same thing. Examples (116) through (118) are interesting because the first word in each one is a bi-morphemic Chinese loanword with the meaning of the last morpheme being identical to the last word of the compound which is indigenous, or in (118) of Turkic origin.¹¹³

In summary, compound noun formation in Santa is varied and interesting. This topic deserves further investigation.

7.2.6.2 Gender

Nouns in Santa are not inflected for nor inherently have any grammatical gender.

7.2.6.3 Number

The plural marker in Santa is -la. This inflectional marker¹¹⁴ is used with principally human and sometimes animate nouns. A couple of lexical examples are given below.

- (119) kuŋ-la 'people' (from kuŋ 'person')
baŋbəŋ-la 'honeybees' (from baŋbəŋ 'honeybee')

¹¹³ But see Chapter 6 section 6.3 for words of Turkic origin. This Turkic loan may date back to Middle Turkic.

¹¹⁴ There is some question whether this marker is actually inflectional. This is because it is optional and usually occurs with human referents. See below.

Example (120) below contains two instances of the plural marker -la. The first is santala ‘Muslim people’ and the second is ənəlani ‘these’ which is in the genitive case. santala ‘Muslim people’ is interesting because it receives plural marking but bidziənni duŋɕian kuŋ ‘we Dongxiang people’ does not, although the referent is clearly plural. ənəlani ‘these’ is noteworthy because ənə is a demonstrative pronoun (co-referential with goni iman fugiə tuŋa jadzi no tauləi ‘sheep, goat, cow, chicken, duck, goose, and rabbit’ in the example) in an associative relationship with the following noun mika ‘meat’. It cannot be a demonstrative adjective here. The plural marking is agreeing with the aforementioned list of animals/meats. Whether this referent should be considered animate or not is difficult to determine. These animals/meats were at least animate at one point in time. Discussion of the use of -la with demonstrative pronouns and pronouns can be found in sections 7.2.1 and 7.2.5 above respectively.

(120) bidziə-ni duŋɕian kuŋ pədzədzi santa-la mika dunda
 IPLEX-GN Dongxiang person other Muslim.people-PL meat among

idziə-ku-ni ʃi goni iman fugiə tuŋa jadzi no tauləi
 eat-I.NM-AC COP.H sheep goat cow chicken duck goose rabbit

ənə-la-ni mika-ni idziə=nə. N1:031

this-PL-AS meat-AC eat=IMP

Among the meat we Dongxiang people and other Muslim peoples can eat are sheep, goat, cow, chicken, duck, goose, rabbit; their meats we can eat.

The plural marker -la is not obligatory, although it frequently occurs with human referents. The following two examples have plural referents but -la is not used.

(121) ɕiəni-də=ni guraŋ səŋɕiən irə=də
 night-LC=TM three celestial.being come=DQ

ɡudəu buluŋ-də hamara-ndu-wo. A2:029
 well edge-LC rest-C/R-PRF

At night, three celestial beings came and rested together at the well's edge.

(122) ɕiəni-də=ni ənə guraŋ səŋɕiən-la pəsə irə=də
 night-LC=TM this three celestial.being-PL again come=DQ

ənə ɡudəu buluŋ dʒiərə hamara-ndu-wo. A2:093
 this well edge on rest-C/R-PRF

At night, these three celestial beings came again and rested on the well's edge.

In example (121) above, guraŋ səŋɕiən ‘three celestial beings’ is the first mention of this referent. However, the plural marker is not used with the noun səŋɕiən ‘celestial being’. In example (122) above, which is from the same text, guraŋ səŋɕiənla is a reintroduction of the same referent. This time the plural marker is used. The only notable differences between the NP in (121) and (122) is that in (121) its activation cost is new and in (122) it is given or at least accessible. The demonstrative ənə ‘this’ precedes the second instance as well. The optional nature of the plural marker warrants further study.

Although -la is used with principally human and animate nouns, it can be found on some inanimate nouns. Example (123) has two instances of inanimate nouns marked with -la.

- (123) sau-san giə-la jəu gau-da-wo.
 live-P.NM house-PL also good-become-PRF

idziə-ku-la jəu gau-da-wo. M3:23-24
 eat-I.NM-PL also good-become-PRF

Houses to live in have also become better. Food to eat is also better.

In this example, both giəla ‘houses’ and idziəkula ‘food’ have the plural marker.

Another example is given in (124) where goronlani ‘courtyards’ is plural. This example shows that the plural marker precedes case.

- (124) lama goron-la-ni ʃu-dzi aru-ka=də
 lama courtyard-PL-AC sweep-SS clean-CS=DQ

niə tukonj takonj-ni nokəi-də idziə-ka-wo. A1:100
 one bowl noodles-AC dog-DT eat-CS-PRF

The lama swept the courtyards clean, and then fed a bowl of noodles to the dog.

7.2.6.4 Possession

Possession between two NPs is usually indicated by putting the possessor NP in the genitive case with the marker -ni and placing this NP before the possessed NP. This is illustrated in (125) where lama ‘lama’ is in the genitive case (-ji is a variant of -ni) and it is preceding the possessed NP giə ‘house’. Notice that it is the possessed NP that receives the locative case marking because the possessed NP giədə ‘house’ is the head of the possessor-possessed construction.

- (125) ənə-la pəsə jawu-dzi lama-ji giə-də kuru-wo. A1:073
 this-PL again walk-SS lama-GN house-LC arrive-PRF
They walked again and arrived at the lama's house.

For more on the genitive case see section 7.3.3.

7.2.6.4.1 Third person possession with =ni

Third person possession can be expressed on the possessed NP by using the genitive marker =ni. This use of the genitive marker differs from its normal use in that it does not receive stress and it is attached to the possessed NP, not the possessor NP. In fact, when the genitive marker =ni is used in this way to indicate third person possession, a possessor NP cannot immediately precede the possessed NP. An example is given in (126) where =ni is coreferential with kun ‘person’.

- (126) ənə kun-də məliə-du biəri=ni niə kəwəŋ olu=dənə
 this person-DT before-P.AS wife=GN one boy give.birth=DQ

duja-ji dʒiə-wo. A2:002

world-AC lay.aside-PRF

This person's previous wife gave birth to a son for him and then she passed away.

Another example is given below where =ni is coreferential with funiəkən ‘fox’.

- (127) funiəkən fugu=dənə arasun=ni kuarala-dzi tɯŋkuliə+dʒiwo. F11:50
 fox die=DQ skin=GN ONOM-SS make.a.sound+PROG
After the fox died, his skin was making a ‘kuarala’ sound.

7.2.6.4.2 First and second person postposed possessor pronouns

A similar process to the one discussed above with =ni is where first and second person possessor pronouns are postposed after the the possessed NP. Thus they are in paradigmatic relationship with the third person genitive marker =ni. These postposed possessor pronouns are similar to =ni in that they are also clitics and are unstressed. An example is given below where mini ‘my’ is postposed after ana ‘mama’.

- (128) bi jəsun olu-sə ana=mi-ni duja idziə-wo. N2:011
 1SGNM nine reach-DL mama=1SG-GN world eat-PRF
 When I was nine years old, my mama died.

The fact that postposed possessor pronouns are clitics is supported by the placement of case marking which precedes the postposed possessor pronouns as in (129) where the benefactive case marker -də precedes tʃini ‘your’.

- (129) “jəjə-də=tʃi-ni bi bəʒ pəi-ji-jə.” A1:139
 grandfather-BN=2SG-GN 1SGNM money compensate-BVS-DES
 “I intend to compensate you for your grandfather.”

In addition, the scope of the postposed possessor pronoun may be more than one NP as in (130) where mini ‘my’ has scope over both ada ‘papa’ and ana ‘mama’.

- (130) ada ana=mini wo, N2:003
 papa mama=1SG-GN EXST
 There is my papa and mama,

Interestingly enough, one can find cases where the possessor NP both precedes and follows the possessed NP as in (131). I imagine the function of this is for emphasis. Notice, however, that in this way first and second person postposed possessor pronouns differ from third person possession.

(131) “ənə ʃi mi-ni qudɔxo wo.
 this COP.H 1SG-GN knife COP.S

bi tʃi-ni miɣa-ni=tʃi-ni otolu-dʒi idʒiə=nə.” F06:59-60
 1SGNM 2SG-GN flesh-AC=2SG-GN cut-SS eat=IMP
“This is my knife. I will cut your flesh (of yours) and eat it.”

The circumstances that lead to the postposed possessor pronouns being used at all is still an open question that requires further study, since their use is optional and apparently not motivated by any grammatical requirements.

7.2.6.5 Reflexives

There are two markers in Santa that indicate reflexive/possession: -nə and -nukun.

7.2.6.5.1 Reflexive/possesive marker -nə

The marker -nə is similar to the third person possession marked with the genitive marker =ni in that it is affixed to the possessed NP and not the possessor NP. -nə differs from the third person possession in that it receives the ultimate stress and may be used with first, second, and third person. The meaning is ‘one’s own X’ where ‘X’ is the possessed NP. In example (132), -nə is coreferential with dʒan juanwəi ‘Lord Zhang’ in the preceding clause.

(132) dʒan juanwəi bajasu-dʒi baə ogi-wo.
 Zhang Lord be.happy-SS money give-PRF

otcin-nə jə ogi-wo. T4:074-5
 daughter-RP also give-PRF

Lord Zhang was happy and gave [him] money. And he also gave [him] his own daughter.

In the next example, -nə is coreferential with first person pronoun bi ‘I’.

- (133) “bi 'agili-nə a-lə ətʃi-jə, ...” F07:33
 1SGNM wisdom-RP fetch-SP go-DES
“I will go fetch my [own] wisdom, ...”

In (134), -nə is coreferential with the second person pronoun tʃi ‘you’.

- (134) “tʃi nuduŋ-nə xami=də bu aji-Ø ma, ...” T6:025
 2SGNM eye-RP shut=DQ IMPR.NEG afraid-IMPR PRT
“Shut your [own] eyes, and do not be afraid, ...”

7.2.6.5.2 Reflexive marker -nukun

The marker -nukun differs from -nə in that it is affixed to the possessor NP, not the possessed NP. The possessed NP is understood and does not follow the possessor NP. The meaning of this marker is ‘something belonging to’ the possessor NP. In example (135), each of the three instances of -nukun is coreferential with su ‘book’. In the second instance, the stem is mi ‘1SG’ not bi ‘1SGNM’.

- (135) hə ʃi niə bəndzi su wo. tʃi-nukun wo nu?
 that COP.H one MW:volume book COP.S 2SG-belong COP.S Q

 puʃi wo. mi-nukun puʃi wo. hə ʃi tʃi-nukun wo.¹¹⁵
 NEG COP.S 1SG-belong NEG COP.S that COP.H 2SG-belong COP.S
That is a book. Is it yours? (Does it belong to you?)
It is not. It does not belong to me. That belongs to you.

¹¹⁵ This example is taken from Lesson 1 (examples 3 and 4) of Bu He’s (1987) *Dongxiang Discourse Material*. Lesson 1 is one of twenty a pedagogical lessons for teaching the Santa grammatical structures. Thus these examples seem slightly contrived.

(136) is another example with -nukun. In this case, the NP is in the accusative case, marked with -ni, which follows -nukun.

- (136) pəsə dʒiu godʒia-nukun-ni mata=nə, MP:81
 still then self-belong-AC forget=IMP
Still then [we] will forget [those things] that belong to ourselves.

7.2.6.6 Temporal =ni

The clitic =ni occurs only with temporal NPs. Since it is a clitic, it does not receive ultimate stress and follows other morphology suffixed to the noun. The function of =ni is not altogether clear, but it frequently appears at a shift in the temporal time frame of a narrative. In (137), =ni occurs with the NP niə ududə ‘one day’ which is in the locative case. The clause A1:019 represents a shift in the temporal time frame from the previous clause A1:018.

- (137) ənə niənəigia goni ciən-ni niə tʃəuxa-də gura-wo. A1:018
 this old.woman sheep tail-AC one box-LC store-PRF
This old woman stored the sheep's tail in a box.

niə udu-də=ni ənə niənəigia lama-də osuŋ atʃi-lə atʃi-wo. A1:019
 one day-LC=TM this old.woman lama-DT weeds hoe-SP go-PRF
One day the old woman went to hoe weeds for the lama.

Example (138) below is a few clauses later in the same text. Clauses A1:037 and A1:038 set up the scene for the next day. In clause A1:039, the scene changes to the next day, and =ni is used with the temporal NP quaitʃi udu ‘next day’.

(138) "maʁaʁi tʃi mi-ni uduru-dʒi gadʒa dʒiəɾə jawu=də
tomorrow 2SGNM 1SG-AC lead-SS field on walk=DQ

arəu dəura komoru-Ø ma. A1:037

back.basket underneath place.a.container.upside.down-IMPR PRT

"Tomorrow you lead me and walk onto the field, place a basket upside down over me,

təɾə-də bi kiəliə-jə." A1:038

3SG-DT 1SGNM say-DES

I intend to speak to him. "

quaitʃi udu=ni ənə niənəigie pəsə osuŋ atʃi-lə irə-wo. A1:039

next day=TM this old.woman again weeds hoe-SP come-PRF

The next day, this old woman again went to hoe weeds.

Example (139) is from a different text. In this case, a boy is instructed to say some words to make some people appear in T6:072. In T6:073, the scene changes to that night, and =ni is used with the temporal NP ɕiənide 'night' which is in the locative case. More study is needed to determine all the factors that influence the use of temporal =ni.

(139) "tʃi jaŋ kiəliə-sə hə-la tʃima-də giə-dʒi irə=nə." T6:072

2SGNM what say-DL 3P-PL 2SG-DT do-SS come=IMP

"If you say this, they will do it and come to you. "

ɕiəni-də=ni ənə kəwaŋ niə uru-sə dʒiəroŋ kuŋ qətʃi-wo. T6:073

night-LC=TM this boy one call-DL four person come.out-PRF

That night, after this boy called out, four people came out.

7.2.7 Coordination with dʒi

In Santa, the conjunction dʒi, borrowed from Chinese jǐ may be used to coordinate different types of constituents. As mentioned in section 7.2.4.2.1, dʒi is

used to coordinate adjectives. Examples (85) and (86) from section 7.2.4.2.1 are repeated as (140) and (141) below.

- (140) ənə usu fugia dzi aruŋ wo. A2:074
 this water big and clean COP.S
This water was big and clean.

- (141) sini quaitʂən dzi guri tɕiau miandʒaŋ wo. N2:115
 new old and three CL felt.blanket have
[Our house] has three new and old felt blankets.

The adjective data reveal that there are two possible strategies for placement of the conjunction dzi, either between the coordinated phrases as in (140) or after them as in (141). The former strategy is probably borrowed from Chinese along with the coordinator dzi. The latter strategy, commonly found in SOV languages, is probably an indigenous strategy (Charles N. Li, personal communication).

Example (142) shows two time/place words coordinated with dzi. In this case dzi follows the coordinated items.

- (142) iŋgiə-sə gəʂu-ni nasuŋ tʂoŋoŋ kuŋ-la məliə quəina dzi
 and.so-DL everywhere-AS age some person-PL in.front behind and

 kərau-lə irə-wo. T5:08
 want-SP come-PRF
*And so some people with varied ages in front and behind wanted to come.*¹¹⁶

The most frequent usage of dzi can be found with nouns. In (143), dzi follows the coordinated nouns tʂusuŋ ‘blood’ and xosuŋ ‘pus’.

¹¹⁶ The exact free translation of this sentence is unclear to me.

(143) kuan-sə tsusun xosun dzi urusu+dziwo. N2:060

foot-AB blood pus and flow+PROG

Blood and pus were flowing from the foot.

Another example of this is given below where dzi follows the coordinated nouns atšan ‘pack’ and əndzəkə ‘donkey’.

(144) niənəigia atšan-ni bau-ka-sə ənə mausuməkətši

old.woman pack-AC come.down-CS-DL this witch

atšan əndzəkə dzi idziə+sənu agi-wo. T2:030

pack donkey and eat+DM take-PRF

After [she] made the old woman's pack come down, the witch took and ate the pack and the donkey.

In (145), dzi follows a list of materials from which clothes are now made.

(145) mi-ni ki-də-du-la ədə musi-san ši dzilun, fadani,
1SG-GN house-LC-P.AS-PL now wear-P.NM COP.H polyester.fiber gabardine

tciaulun, mau bidzi, duandzi dzi musi+dziwo. N2:113

corduroy wool ??¹¹⁷ satin and wear+PROG

The things [the people] in my household are now wearing are made of polyester fiber, gabardine, corduroy, wool ??, and satin.

Another common pattern consists of the adverb man ‘all’ following the conjunction dzi when it occurs after a list of coordinated items as in (146). This adverb is used to indicate that all the items in the list are included in the predication that follows.

¹¹⁷ The translation of this word is unclear.

(146) pəsə bi bəidziŋ daɕiə, tɕiŋxua daɕiə, sisanlin
 also 1SGNM Beijing university Qinghua university 13.Ming.tombs

suəiku, dziŋsi bowuquan, səudu tɕijiquan dzi man sanguan
 reservoir military.affairs museum capital gymnasium and all visit

giə-dzi udzə-wo. N2:108

do-SS see-PRF

I also visited Beijing University, Qinghua University, the 13 Ming Tombs Reservoir, the Military Affairs Museum, and the Capital Gymnasium.

In addition to following coordinated nouns, dzi may occur between coordinated NPs as in (147) where dzi occurs between niə nokəi ‘a dog’ and niə mauə ‘a cat’.

(147) ənə kəwəŋ-ni giə-də niə nokəi dzi niə mauə wo. T6:101

this boy-GN house-LC one dog and one cat EXST

At this boy's house there was a dog and a cat.

Another example is given in (148) where dzi occurs between two NPs, gua hamusa niəngu ‘two plates full of silver’ and gua hamusa antan ‘two plates full of gold’. The placement of dzi between the NPs may be governed by the fact that these NPs are not just simply isolated nouns but full noun phrases with modifying elements.

(148) “gua hamusa niəngu dzi gua hamusa antan

two plate silver and two plate gold

tʃi agi-dzi ətʃi=də dzəru-lə ətʃi-Ø.” T6:035

2SGNM take-SS go=DQ make.use.of-SP go-IMPR

“Go, you go and take two plates full of silver and the two plates full of gold and make use of it.”

Finally, the conjunction dzi can be used to coordinate verbs as in (149). Notice that only the last verb receives the aspectual marking.¹¹⁸

- (149) udu=ni niə udu qaran-tala uliə otsi dzi uliə idziə=nə. N1:007
 day=TM one day black-LMT not eat and not drink=IMP
[We] do not eat or drink the whole day until dark.

7.3 Case

In this section I will look at inflectional case morphology in Santa. There are between six and nine different cases in Santa, depending on how they are analyzed. They are listed below.¹¹⁹

(150) -Ø	Nominative (NM)
-ni ~ -ji	Accusative/Genitive (AC, GN)
-də	Dative/Locative/Benefactive (DT, LC, BN)
-sə	Ablative (AB)
=gala ~ =guala	Instrumental (INST)
-lə	Comitative (CM)

All of the case markers are clitics because they attach to NPs, not just nouns.

7.3.1 Nominative Case -Ø

Nouns in the nominative case appear uninflected. In (151), the NP ənə laudziga ‘this old man’ is uninflected. It is the subject of the verb dziə ‘to lay aside’ which has an object duja ‘world’ in the accusative case.

¹¹⁸ For a more detailed discussion of this example, see section QQ below.

¹¹⁹ In addition to these there are two other cases mentioned in the literature. These are -rə and -kun which are glossed ‘DIRECTIVE1’ and ‘DIRECTIVE2’. I have not included these in my discussion because I have no clear examples of them in my data.

- (151) *niə udu-də=ni ənə laudziqa-Ø duja-ji dziə-wo. A1:004*
 one day-LC=TM this old.man-NM world-AC lay.aside-PRF
One day this old man laid the world aside (passed away).

Nouns also appear in the nominative case if they are the subject of an intransitive verb as in (152) where *ənə sidzi* ‘this lion’ is uninflected and is subject of the intransitive verb *saxi* ‘to wait’.

- (152) *ənə sidzi-Ø saxi+dziwo. F07:42*
 this lion-NM wait+PROG
This lion was waiting.

Since the subject of a transitive verb in (151) and the subject of an intransitive verb in (152) receive the same case marking, the case marking pattern is nominative/accusative. It is not ergative/absolutive because the object of the transitive verb and the subject of the intransitive verb do not receive the same case marking.

7.3.2 Accusative Case *-ni* ~ *-ji*

The accusative case marker and the genitive case marker are homophonous, but they are functionally distinct.

NPs in the accusative case appear with the marker *-ni* ~ *-ji*. Objects of a transitive verb normally appear in the the accusative case. In (153), the object of the verb *otşira* ‘to meet’ is the NP *sauxuni* ‘goat’ which is in the accusative case.

- (153) *ənə dzaŋgəi sauxu-ni məliəşida otşira-wo. F06:36*
 this wolf goat-AC first meet-PRF
The wolf first met the goat.

Animate object NPs can be preposed if the NP is in the accusative case. In (154) the NP *sauxuni* ‘goat’ has been fronted before the subject NP *dzaŋgəi* ‘wolf’. Unfortunately the goat does not fare too well in this position.

(154) souxu-ni dʒaŋgəi idziə aɡi-wo. F06:52

goat-AC wolf eat take-PRF

The wolf took and ate the goat.

Inanimate object NPs may be preposed as well, and as (155) shows, it is not case-marked. However, there is no question that it is the object due to its inanimacy.

(155) “ɡua hamusa miəŋqu dzi ɡua hamusa antan

two plate silver and two plate gold

tʃi aɡi-dʒi ətʃi=də dʒaru-lə ətʃi-Ø.” T6:035

2SGNM take-SS go=DQ make.use.of-SP go-IMPR

“Go, you go and take two plates full of silver and the two plates full of gold and make use of it.”

As we see in (155) above, accusative case marking is not obligatory. Frequently NP objects appear unmarked with no overt case marking. Another example is given in (156) where the object of the verb oɡi ‘to give’ is sansi lian antan ‘thirty tael of gold’. This NP object is not case-marked, but it is unlikely to be interpreted as a subject since it is inanimate and also since it is in the object slot directly preceding the verb.

(156) iŋɡiə ənə kəwaŋ-də sansi lian antan oɡi-wo. A1:143

and.so this boy-DT thirty MW:tael gold give-PRF

And so [he] gave this boy thirty tael of gold.

A human/animate unmarked object NP is illustrated in (157) where niə biəri ‘a wife’ is the object of the verb oɡi ‘to marry’. Although this NP is human and animate, it is unlikely to be interpreted as a subject of the verb because ənə kuŋ ‘this person’ is already in the subject slot and niə biəri ‘a wife’ is in the direct

object slot preceding the verb.¹²⁰ In other words, word order is a major cue for distinguishing the role of the NP.

- (157) ənə kuŋ pəsə niə biəri aɡi-wo. A2:003
 this person again one wife marry-PRF
This person again took a wife.

7.3.3 Genitive/associative -ni ~ -ji

NPs in the genitive case are marked with -ni ~ -ji. They are always possessor NPs and never possessed NPs.¹²¹ This is shown in (158) where the possessor NP iman ‘goat’ is in the genitive case and the possessed NP, which is the head, is unmarked.

- (158) “ənə ʃi iman-ni tsigən wo.” F06:44
 this COP.H goat-GN ear COP.S
“These are goat’s ears.”

When both the genitive and accusative case appear within a possessor-possessed construction, the possessor NP appears in the genitive case while the possessed NP appears in the accusative. This is illustrated in (159) below where the second occurrence of goni ‘sheep’ appears in the genitive case¹²² and the possessed NP çiən ‘tail’ appears in the accusative. The first occurrence of goni ‘sheep’ is also in the genitive case, but in this instance the possessed NP çiən ‘tail’ is in the ablative case. As a general rule, case marking other than the genitive case is always marked on the possessed NP which is the grammatical head.

¹²⁰ There may also be some cultural predisposition for the female to be the object of this verb.

¹²¹ Or associative NPs and not associated NPs as discussed below.

¹²² I have not determined the factors which govern the alternation of -ni and -ji. However, it is safe to say that -ji is phonetically a reduced form of -ni.

(159) goni-ni ɕiən-sə niə la-ji-lə ətʃi-ku-də
 sheep-GN tail-AB one pull-BVS-SP go-I.NM-LC

goni-ji ɕiən-ni dən-dzi=də aɡi+dziwo. A1:017
 sheep-GN tail-AC yank-BVS=DQ take+PROG

Upon going to pull the sheep's tail, a yank on the sheep's tail and it came off.

The use of the genitive case is not obligatory. Notice in example (160) below, which is the next sentence in the same text as (159) above, that goni 'sheep' is unmarked and not in the genitive case, even though there is a genitive relationship between it and the following NP ɕiən 'tail'. However, the genitive relationship between these two NPs has already been established in the previous clause.¹²³

(160) ənə niənəigia goni ɕiən-ni niə tʃəuxa-də ɡurə-wo. A1:018
 this old.woman sheep tail-AC one box-LC leave-PRF
This old woman left the sheep's tail in a box.

Some pronominal genitives or postposed after the possessed NPs. See section 7.2.6.4.2 above for discussion of postposed possessor pronouns.

Another related function of -ni is its associative usage. The associative usage is similar to the genitive usage in that it is the associative NP which is marked and not the associated NP which is the head. The structure is identical to the possessor-possessioned structure described above. Li & Thompson (1988) say, 'the two noun phrases are 'associated' or 'connected' in some way; the precise meaning of the association or connection is determined entirely by the meanings of the two noun phrases involved (Li & Thompson 1981:113)'. Some examples are given below.

¹²³ One of the factors that may be governing whether the genitive case marking is used or not is inalienability. In QQ, the tail is an inalienable possession of the sheep.

- (161) ingiə=dənə qudəŋ-ni goni-ji la-ji-lə ətʃi-wo. A1:010
 and.so=DQ pen-AS sheep-AC pull-BVS-SP go-PRF
And so [he] went and pulled the sheep from (of) the pen.
- (162) “mi-ni çiandzi-ni miəngu-ni bu godziə-ɣa-ndu-Ø.” A1:119
 1SG-GN chest-AS silver-AC IMPR.NEG move-CS-C/R-IMPR
“[You guys] do not move my chest of silver.”
- (163) dagai liuʃi nian-sə məliə bidziən-ni duŋçiən-ni ərə kun-la
 probably sixty year-AB before 1PLEXNM-AS Santa-AS male person-PL
piçiə piçiə-liə=nə. N1:051
 waistband wear.a.waistband-VNS=IMP
Probably from sixty years before, we Santa males have been wearing waistbands.

In (161) above, the qudəŋni ‘pen’ does not possess the goniji ‘sheep’ (a genitive relationship), but rather, the ‘sheep’ is associated to it. It can be inferred that the ‘sheep’ is inside the ‘pen’. In (162) above, the çiandzini ‘chest’ does not possess the miənguni ‘silver’, but rather the ‘silver’ is associated to the ‘chest’. It can also be inferred that the ‘silver’ is inside the ‘chest’. In (163), there are two associative phrases piled up recursively, bidziənni ‘we (exclusive)’ and duŋçiənni ‘Santa’. In the first case the associative NP bidziənni ‘we (exclusive)’ does not possess the associated NP duŋçiənni ‘Santa’, but rather the ‘Santa’ are associated to bidziənni ‘we (exclusive)’ and thus it is inferred they are one and the same. In the next case, the associative NP duŋçiənni ‘Santa’ (which was the associated NP in the earlier case) does not possess the associated NP ərə kunla ‘males’ but it can be inferred that the ‘males’ are part of the ‘Santa’ nationality.

7.3.4 Locative Case -də

The locative, dative, and benefactive cases are homophonous, but are employed for functionally different purposes.

NPs in the locative case are marked with -də. These NPs are used to indicate the location of an action or another object. In (164), the NP həliəni nuruŋdə ‘hawk’s back’ is in the locative case because this is where the person rode.

- (164) ənə kuŋ həliə-ni nuruŋ-də unu -wo. T4:115
 this person hawk-GN back-LC ride-PRF
This person rode on the hawk’s back.

In the example below, usudə ‘water’ is in the locative case because this is where the tiger drowned.

- (165) ənə 'basi usu-də jan-dzi-Ø fugu-wo. F08:54
 this tiger water-LC drown-BVS-SN die-PRF
This tiger died by drowning in the water.

Temporal NPs in the locative case are also very common in order to show location in time.

- (166) ətɕiə-də niə baŋ juanwəi wo. T5:01
 past-LC one Bang rich.man COP.S
In the past, there was (a man named) Lord Bang.

7.3.5 Dative Case -də

NPs in the dative case are also marked with -də. These NPs are either recipients of an object or action or possessors of an object. In the example below, ənə kəwanə ‘this boy’ is in the dative case because he is a recipient of the ‘thirty tael of gold’.

- (167) iŋgiə ənə kəwan-də sanʃi lian antaŋ oŋi-wo. A1:143
 and.so this boy-DT thirty MW:tael gold give-PRF
And so [he] gave this boy thirty tael of gold.

NPs which are recipients of verbs of saying like kiəliə ‘to say’ and asə ‘to ask’ are also in the dative case. An illustration of this is given in (168) where the basidə ‘tiger’ is in the dative case.

- (168) ʂidzi basidə kiəliə+dziwo, ... F7:15
 lion tiger-DT say+PROG
The lion says to the tiger, ...

NPs which possess an object are in the dative case when they are used in conjunction with the verb wo ‘to have’ as in (169).

- (169) ma-də dolon təiauruŋ wo.” T4:045
 1SG-DT seven head have
“I have seven heads.”

7.3.6 Benefactive Case -də

NPs in the benefactive case are also marked with -də. Benefactive NPs are ones for whose benefit or on whose behalf an action is performed. In (170), ənə niənəigie ‘the old woman’ is hoeing weeds for the benefit or gain of the lama ‘lama’.

- (170) niə udu-də=ni ənə niənəigie lama-də osuŋ atʂi-lə atʂi-wo. A1:019
 one day-LC=TM this old.woman lama-BN weeds hoe-SP go-PRF
One day, this old woman went to hoe weeds for the lama.

In (171), the referent of the benefactive NP jəjadətʂini ‘your grandfather’ is actually dead. So the action of compensating the addressee is done on behalf of the ‘grandfather’. Neither the locative nor the dative interpretation of -də works here.

- (171) ‘jaia-də=tsi-ni bi baə pəi-ji-jə.” A1:139
 grandfather-BN=2SG-GN 1SGNM money compensate-BVS-DES
“I intend to compensate [you] for your grandfather.”

In summary, it is common in many languages for the same case marker to be used to denote locatives (in place and time), datives (recipients and possessors), and benefactives. This is true for Santa as well.

7.3.7 Ablative Case -sə

NPs in the ablative case take the case marker -sə. These NPs indicate the source or starting point of an object or action. In (172), a temporal NP hə udusə ‘that day’ is in the ablative case indicating that from that point in time the cat eats on the ‘kang’. ¹²⁴

- (172) hə udu-sə mauə xuai dʒiərə idʒiə=nə. T6:138
 that day-AB cat kang on eat=IMP
From that day, the cat eats on the kang.

The ablative case differs from other case markers in that it can be affixed to postpositions like dʒiərə ‘on’ as in the example below where it indicates ‘from a point on the horse’.

- (173) mori dʒiərə-sə anda-Ø bau-Ø irə-Ø
 horse on-AB release-SN fall-SN come-SN

 ənə kəwəŋ uila-dʒi sau+dʒiwo. BH:24-5
 this boy cry-SS sit+PROG
From off the horse he falls and this boy is sitting and crying.

¹²⁴ A ‘kang’ is a raised bed which is heated underneath by hot coals.

7.3.8 Instrumental Case =gala ~ =guala

NPs in the instrumental case take the marker =gala ~ =guala which is unstressed.¹²⁵ These NPs are tools or instruments which are used in order to perform an action. In (174) the NP dziəsun=gala is in the instrumental case and is the tool which is used to lower the boy into the well.

- (174) iŋgiə ənə mila kəwəŋ-ni dziəsun=gala dʒiaudziliə-dʒi
and.so this small boy-AC rope=INST let.down.with.a.rope-SS

gudəu-də bau-ʒa-wo. A2:092

well-LC fall-CS-PRF

And so the small boy was let down into the well with a rope.

In the next example, qudəi=guala ‘the Chinese language’ is the tool that is used by the groom to seal the engagement.

- (175) ənə qudəi=guala kiəliə-sə dʒiŋxun giə-wo bæi. MC:032
this Chinese=INST say-DL engaged do-PRF PRT

After this [young man] uses Chinese to speak, the engagement is completed.

7.3.9 Comitative Case -lə

NPs in the comitative case are marked with -lə. These NPs along with another NP perform an action together or are acted upon together. The comitative case marking appears on the final or head NP as can be seen in example (176) below. In this example, the turɣa ‘chicken’ and the gogotsən ‘pigeon’ are spoken to by the sadziki ‘magpie’ and are both recipients of the the action of the verb kiəliə ‘to say’. Notice that gogotsənlədə ‘pigeon’ is not only in the comitative

¹²⁵ The factors governing the alternation between =gala and =guala have not been determined. It may be dialectal in nature.

case, but in the dative case as well. When an NP is in the comitative case, the comitative case marking precedes any other case marking.

- (176) sadziŋi gudzuŋ-nə dʒi-da-ka+sənu tuŋa goqotsən-lə-də
magpie neck-RP stick.out-BVS-CS+DM chicken pigeon-CM-DT

kiəliə+dziwo: MP:43-7

say+PROG

As the magpie stuck his neck out, he says to the chicken and the pigeon together ...

In example (177), the comitative case marker -lə on the NP niənəilənə ‘old woman’ has scope over the NP biərinə ‘his wife’ which is in the preceding clause.

- (177) biəri-nə la-ji+sənu niənəi-lə-nə gau udu-nə
wife-RP pull-BVS+DM old.woman-CT-RP good day-RP

dawa-ka-lə irə-wo. A1:149

pass-CS-SP come-PRF

Soon after [he] had pulled his wife [on a cart], they spent their good days together with his adopted grandmother.

This case marker does not occur very frequently in my data. However, Charles N. Li (personal communication) has suggested that the final syllable of gualə ‘two together’ is historically the comitative case marker. The lexicalization and frequent use of this term may explain the phonetic difference between the comitative case marker -lə and the final syllable of gualə which is lə, not lə.

7.4 Are there indefinite and definite markers in Santa?

In this section I will briefly discuss the possibility of the development of indefinite and definite markers in Santa. My impression is that Santa is in the

process of grammaticizing an indefinite marker from the numeral niə ‘one’ and a definite marker from the proximate demonstrative adjective ənə ‘this’. The primary function of the numeral niə ‘one’ is to denote a quantity of ‘one’ as opposed to a quantity of more than one, or to denote *singularity* as opposed to *plurality*. One of the primary functions of the demonstrative adjective is to contrast or emphasize the designated NP over and against another NP. In the discussion that follows, I will attempt to show that there are cases where niə and ənə are no longer clearly functioning primarily in these ways.

The following example is from the text noŋəi mauə ɣuala ‘The dog and the cat’. The main protagonist is introduced in the first line by means of a presentative existential construction. The referent kəwan ‘boy’ is both new and indefinite.

- (178) ətɕiə-də niə kəwan wo. T6:001
 past-LC one boy EXST
In the past, there was a boy.

In (178) above, the referent kəwan ‘boy’ is preceded by niə. niə does not precede this referent again, but this is not unusual. However, this referent appears 29 more times lexically as kəwan ‘boy’ (all definite and given). Of these 29 occurrences, 25 of them co-occur with ənə. The frequent occurrence of ənə before this given and identifiable referent makes ənə look much more like a definite marker or article rather than a demonstrative adjective whose function would be for contrast or emphasis.

Another case, shown in (179), is from the text ga sundzi ‘The small grandson’ where one of the protagonists, the niənəiqiə ‘old woman’ is introduced in the first line with a presentative existential construction. As is usually the case with presentative constructions, the referent is new and indefinite. It is also preceded by niə.

(179) ətɕiə-də niə niənəiqiə niə laudziga guala wo. A1:001

past-LC one old.woman one old.man two EXST

Once upon a time there was an old woman and an old man.

This referent occurs 17 times altogether in the text. Of these, ənə co-occurs with niənəiqiə ‘old woman’ 11 times, leaving only 5 occurrences of niənəiqiə ‘old woman’ that are not preceded by either niə or ənə.

This general pattern is found throughout many texts in my database. However, it should be noted that there are also instances of referents that are not preceded by ənə most of the time. In the text qudza sauxu guala ‘The sheep and the goat’, one of the protagonists the sauxu ‘goat’ is introduced the first time with niə and is preceded the next time by ənə. The remaining five occurrences are bare. It may be that the frequency of ənə may vary from speaker to speaker, or this may be signaling that the grammaticization process is still in its early stages.

My hypothesis is that as the frequency of ənə co-occurring with the same referent increases, that its contrastive/emphatic function would weaken accordingly. In other words, the more it is used, the less power it will have to function contrastively or emphatically. That is because its contrastive/emphatic function relies on its occurrence as being unexpected or surprising. If the same referent is always, or even most of the time, preceded by ənə, then how is it functioning contrastively or emphatically? What is it contrasting with? It is in this way that the demonstrative adjective ənə seems to be losing its contrastive/emphatic function and is in the process of becoming a definite marker.

With respect to the use of niə as an indefinite marker, this is more difficult to judge since a referent is usually only indefinite when it is first introduced. So what is the criteria for determining that niə is not simply functioning as the numeral ‘one’? There are some cases given below which I believe shed some light on this issue.

(180) ətɕiə-də niə baŋ juanwəi wo. T5:01

past-LC one Bang richman EXST

In the past, there was a lord Bang.

(181) manəŋ-də niə səikəŋ nudun wo. T8:03

zokor-DT one beautiful eye have

The zokor had (some) beautiful eyes.

(182) ənə ʃi niə bajan kun-ni kəwəŋ wo. T5:11

this COP.H one rich person-GN son COP.S

He is a rich person's son.

In (180) above, the referent baŋ juanwəi 'lord Bang' is preceded by the niə. It seems unlikely that the singularity of baŋ juanwəi 'lord Bang' is what niə is denoting here since real world knowledge teaches us that it would be a rare occurrence for there to be more than one of him, especially since he is a 'lord'.¹²⁶ This is the first mention of this referent and it is both new and indefinite.

In (181) above, the referent being introduced is nudun 'eye(s)'. Again, real world knowledge teaches us that 'eyes' usually come in pairs. We know the referent here is not a single 'eye', because later in the story the zokor trades his eyes for the vole's tail and becomes blind. He would not have become blind if he had traded one eye. It also doesn't make sense that it is denoting one set of eyes, since there is no need to contrast this with animals that have two sets of eyes. This referent is also new and indefinite.

Finally, in (182) above, the referent bajan kunni 'rich person' is preceded by niə. It is in the genitive case because it is the possessor NP in a possessor-possessed construction where kəwəŋ 'son' is the possessed NP. Again, it is unlikely that niə here is denoting singularity since a son has only one father

¹²⁶ juanwəi is of unknown origin (probably Chinese) and is translated 'richman' by Todaeva (1961), but its consistent co-occurrence with baŋ 'SURNAME' and its placement after the surname makes it clear that it is being used as a title here.

and there is no need to contrast this with someone who has two. This referent, bajan kunni ‘rich person’, is introduced in an equational construction and is new and indefinite.

These examples all lend support to the idea of niə developing into an indefinite marker when it is used in presentative constructions that are introducing new and indefinite NPs. In each of the aforementioned cases, the denotation of the referent’s singularity is questionable. In (180) and (182) the denotation of plurality would challenge our real world knowledge. In (181), the denotation of singularity does the same thing. So it would seem the niə is serving a different function in these cases and I propose that it is to mark the indefiniteness of the referent.

Whether or not Santa is in the process of developing an indefinite/definite marker distinction will require further investigation, but these preliminary findings, I believe, are very suggestive.

7.5 The postpositional phrase

In this section I will discuss the postpositional phrase. I will discuss word order in section 7.5.1 and the components of the postpositional phrase in section 7.5.2.

7.5.1 Word Order within the Postpositional Phrase

The word order of the postpositional phrase (PP) is illustrated below.

(183) **PP = NP Postposition**

There are no prepositional phrases in Santa, even though there has been considerable syntactic influence from Chinese Hui.

7.5.2 Components of the Postpositional Phrase

As is shown in (183) above, the major components of the postpositional phrase are the noun phrase and the postposition. For discussion of the noun phrase, see above. I will discuss postpositions in section 7.5.2.1 and time/place words, which share many features with postpositions, in section 7.5.2.2.

7.5.2.1 Postpositions

The list of true postpositions in Santa is very small. Generally the semantic function of these is to specify the relative position or location of an object or action to another NP. I consider the postpositions listed below the only true ones because they must co-occur with an NP.

- | | | |
|-------|--------|----------------------------|
| (184) | dziərə | ‘on, upon, on top of’ |
| | dəura | ‘under, underneath, below’ |
| | dunda | ‘among, amidst’ |

There are a number of other lexical items in Santa that look like postpositions and commonly co-occur with an NP, but these items may occur independently as free morphemes as well, thus I do not consider them postpositions. See discussion of *time/place* words in section 7.5.2.2.

Some examples of postpositional phrases are given below. In (185), there are two postpositional phrases. In each case the postposition follows a simple NP.

- (185) “maḱaʃi tʃi mi-ni uduru-dzi [gadza dziərə] jawu=də
 tomorrow 2SGNM 1SG-AC lead-SS field on walk=DQ

[arəu dəura] komoru-Ø ma, ... ” A1:037
 back.basket underneath place.a.container.upside.down-IMPR PRT

“Tomorrow you lead me onto the field, and then place me underneath an upside down basket, ... ”

In (186) the postposition phrase contains a complex NP, niə bajaran kuṇni pudza gadza ‘a rich person’s bean field’.

- (186) ənə kəwəŋ lama-ni əri-dzi olu+sənu
 this boy lama-AC find-SS can+DM

[niə bajaran kuṇni pudza gadza dziərə] ətʃi-wo. A1:124
 one rich person-AC bean field on go-PRF

As soon as the boy found the lama’s body, he pulled him onto a rich person’s bean field.

However, there are a number of characteristics exhibited by postpositions that challenge the status of the postpositional phrase in Santa. When a postposition follows an NP, it is unstressed. So in example (187) in the postpositional phrase mutuŋ dʒiərə ‘on/in the tree’ the only stressed syllable with primary stress is the second syllable of mutuŋ ‘tree’.

- (187) hə [mu'tuŋ dʒiə.rə] xo,lu quri-'wo, F11:33
 3SGNM tree on run go.up-PRF
 He ran up into the tree.

From this it appears that postpositions are enclitics that follow an NP. Other evidence to support this is that the reflexive-possessive marker -nə (also an enclitic) may follow the postposition as in (188) below.

- (188) kəwəŋ-ni kuan dəura-nə kidʒiə-ʒa-wo. A1:063
 boy-AC feet below-RP sleep-CS-PRF
 [The lama] made the boy sleep below his own feet.

In (188), the reflexive/possessive marker -nə follows the postposition dəura ‘below’. The reflexive/possessive marker -nə is coreferential with the subject lama ‘lama’ which is not overtly mentioned, but is understood from the previous context. The kəwəŋni ‘boy’ is in the accusative case because he is the causee of causative verb kidʒiəʒa ‘to make someone sleep’ which is derived from the intransitive verb kidʒiə ‘to sleep’. For more on causatives see section 5.3.2.1.2.1.

In addition to the reflexive/possessive marker -nə, postpositional phrases may also be marked for third person possession with the genitive marker =ni as in (189). This is another characteristic that supports the fact that postpositions are enclitics.

(189) niə udu=ni ənə mudzə-nə bæiliə=dənə ula-sə bau-sə
 one day=TM this firewood-RP carry.on.back=DQ mountain-AB down-DL

mo dziərə=ni ciənfəŋ kai dawa-dzi irə-wo. T4:005
 road on=GN whirlwind wind pass-SS come-PRF

One day, as this person came down from the mountain carrying his firewood on his back, a whirlwind came and passed him on his road.

In (189), third person possession is indicated with the genitive marker =ni, which follows the postpositional phrase mo dziərəni ‘on his road’. There are only 2 other cases like this in my database, and they are both clearly instances of the third person possession.

The final characteristic that supports the notion that postpositions are better viewed as enclitics, is that the ablative case marker -sə can be found on postpositional phrases as in (190).

(190) ingiə-sə lama no dunda-sə ciəri-wo. A1:066
 and.so-DL lama sleep amidst-AB wake.up-PRF
And so the lama woke up from his sleep.

The ablative case-marker is used to express ‘from’ the position or location described by the postpositional phrase.

Although postpositions are best understood as enclitics, there is a good argument why postpositional phrases should not be treated as NPs. This is because postpositional phrases are never case-marked as core arguments of the verb. They may be case-marked for the ablative, but this is an oblique, not a core argument.

Another way that postpositional phrases differ from NPs, is that when the noun is case-marked, the case-marker and the head noun form a tighter

phonological unit.¹²⁷ This is because every case-marker, except for =Gala ‘INST’ which is an oblique case-marker, causes the stress to shift to the final syllable of the case-marked noun. Postpositions do not cause the stress of the noun to shift. Even though the postposition does not have its own primary stress, the NP-postposition unit is less phonologically bound than a case-marked NP.

The postpositional phrase in Santa, admittedly, does not have well-defined boundaries and justification for treating postpositional phrases as such rather than as NPs is not overwhelming. But it seems that postpositional phrases in Santa are distributionally and semantically set apart and therefore distinctive from NPs. This problem deserves further consideration.

7.5.2.2 Time/place words

Time/place words¹²⁸ share some properties with postpositions. One of the chief differences is that they are free morphemes, while postpositions must occur with an NP. Generally they are used to express the position of a referent or location of an action in space or time.

A list of some time/place words is given below.

(191)	sudoro	‘inside’
	gadana	‘outside’
	məliə	‘in front, before, formerly’
	quəina	‘in back, after, later’

In (192) below, the time/place word sudoro ‘inside’ occurs after the NP əna manan ‘this zokor’. It could be analyzed as a postpositional phrase with əna manan ‘this zokor’ as the NP and sudorona ‘inside’ as the postposition. Since the

¹²⁷ Case-markers are actually enclitics, since they co-occur with and have scope over the whole NP.

¹²⁸ The term *time/place* word is a direct translation from Bu He’s publications. I have chosen to retain this term.

‘postposition’ is marked with the reflexive/possessive -nə, its structure looks parallel to example (188) above.

- (192) ənə manən sudoro-nə sumu-la+dziwo, ... T8:07
 this zokor inside-RP think-BVS+PROG
This zokor inside himself was thinking, ...

However, as example (193) shows, sudoro ‘inside’ does not need to follow an NP. In this case it is modifying the verb, expressing where to sit. In (192) it looks much more like a noun or possibly an adverb.

- (193) xuai dʒiərə qurri ixəu, sudoro sau-ka. M1:10-11
 kang on go.up after inside sit-CS
*After [they] go up on the kang, [I] make[them] sit inside.*¹²⁹

If time/place words are nouns, and do not need to co-occur with an NP, then perhaps there is no need to analyze (192) above as a postpositional phrase. Other cases of time/place words occurring independently are given in (194) and (195).

- (194) nokəi gadane saki-wo. T6:114
 dog outside wait-PRF
The dog waited outside.
- (195) “niənəi, niənəi! tʃi quəina-ni niə udzə-Ø.” T2:036
 old.woman old.woman 2SGNM back-AC one look.at-IMPR
“Old woman, old woman! Take a look back!”

In example (194) above, the time/place word gadane ‘outside’ is modifying the verb saki ‘to wait’ and is not functioning as a postposition to the NP nokəi ‘dog’.

¹²⁹ A ‘kang’ is a raised bed which is heated underneath by hot coals. Also in example QQ below.

(195) above shows that time/place words differ from postpositional phrases in that they can take the accusative case. The time/place word quəina 'back' is in the accusative case and is the object of the verb udzə 'to look at'. Time/place words can also take the ablative case. In addition, as example (192) above shows, they also take the reflexive/possessive marker.

Time/place words may also modify nouns as (196) shows.

- (196) "tʃi-ni quəina goron-də ədzixəŋ antəŋ wo." A2:077
 2SG-GN back courtyard-LC some gold EXST
In your back courtyard there is some gold."

In (196), quəina 'back' is modifying gorondə 'courtyard' which is in the locative case.

Up to this point, we have discussed the positional function of time/place words with respect to place. They also may refer to position in time as məliə 'before' in the following example shows.

- (197) dagai liuʃi nian-sə məliə bidziən-ni duŋciəŋ-ni ərə kuŋ-la
 probably sixty year-AB before IPLEXNM-AS Santa-GN male person-PL

piçia piçia-liə=nə. N1:051

waistband wear.a.waistband-VS=IMP

From probably sixty years back, we Santa men have been wearing waistbands.

In summary, time/place words are best analyzed as a special sub-class of nouns. They are similar to postpositions in that they may follow an NP with which they are semantically linked, may take ablative case-marking and the reflexive/possessive marker. Finally they share the feature of expressing position in space. They are different from postpositions in that they are free morphemes (due to their nominal nature), they may take the accusative case (thus they may

occur as a core argument of the verb), they are semantically linked to verbs as well as NPs, and they may express position in time.

An additional feature that time/place words share with postpositions is that time/place words and postpositions are the only lexical categories that can take the clitic -du ‘P.AS’. This is discussed separately in the next section.

7.5.2.2.1 *The positional associative marker -du*

The clitic -du is only attached to items that express position in space and time. Bu He (1983) *Dictionary of the Dongxiang Language* categorizes lexical items marked with -du as derived adjectives, but I have rejected this categorization. Some examples of these derived ‘adjectives’ are given below.

- (198) dziərə-du ‘on the surface of’ (from dziərə ‘on’)
dunda-du ‘in the middle of’ (from dunda ‘among’)
sudoro-du ‘inside of’ (from sudoro ‘inside’)

A closer analysis of the function of -du reveals that it is an associative marker of position ‘P.AS’. See section 7.3.3 for more on associative phrases. In (199) below, the head noun kunla ‘people’ is preceded by the clause həni qa dəura-du ‘under his leadership’. -du is attached to the postposition dəura ‘under’ but has scope over the entire postpositional phrase. The clitic -du signals that the preceding phrase is in an associative or modifying relationship with the following head noun.

- (199) ingiə-sə [hə-ni qa dəura-du] kun-la sida-ka-wo. N2:099
and.so-DL 3SG-GN hand under-P.AS person-PL pull.back-CS-PRF
And so the people under his leadership pulled back.

Another example is given below where the postpositional phrase tʃini tʃiaurun dziərədu ‘on your head’ is in an associative relationship with the head hə ‘that’ which is a demonstrative pronoun.

- (200) “[tsi-ni tɕiaurun dʒiəɾə-du] hə ʃi jan wo?” F06:41
 2SG-GN head on-P.AS that COP.H what COP.S
“What is that which is on your head?”

As mentioned above, time/place words function differently than postpositions. This is illustrated in (201) below where məliədu ‘previous’ occurs independently, not in a postpositional phrase. It is in an associative relationship with the head noun biəri=ni ‘his wife’.

- (201) ənə kuŋ-də [məliə-du] biəri=ni niə kəwan olu=dənə
 this person-DT before-P.AS wife=GN one boy give.birth=DQ

duja-ji dʒiə-wo. A2:002

world-AC lay.aside-PRF

This person’s previous wife gave birth to a son for him and then she passed away.

A similar example is given in (202), except that it is a question word qala ‘where’ which is taking the clitic -du, not a time/place word or a postpositional phrase. However, qala is a question word which is requesting location, so it falls within the semantic field of positional lexical items to which -du is attached. The associative relationship expressed by qaladu sunguna expresses something like, ‘the scallion place’ or ‘a place that has scallions’.

- (202) uwən tʃa-də [qala-du] sunguna wo? N2:090
 winter season-LC where-P.AS scallions EXST

In winter season, where is there a place that has scallions?

In summary, -du is an associative marker of position that is attached only to positional lexical items or phrases. When the lexical item is a postposition, the full postpositional phrase is associated with the head noun. When it is a time/place word or any of the other positional lexical items, then only the single lexical item is associated with the head noun.

Chapter 8

Syntax

8. Introduction

In this chapter, I will cover the sentence in section 8.1 and clausal elements in section 8.2. I have included an in-depth study of switch-event (non-finite verbal) markers in section 8.3.

8.1 The Sentence

In this section I will discuss the sentence in Santa. In section 8.1.1 I will discuss word order within the sentence and in section 8.1.2 I will briefly discuss the components of the sentence. In section 8.1.3 I will discuss copula verbs and copular constructions. In section 8.1.4 I will discuss question formation and adverbial constructions with ixəu. Before I proceed, though, I will discuss the sentence and how it contrasts with the clause.

A sentence in Santa may contain any number of clauses. A clause minimally consists of a verb and its arguments. Because Santa is a clause-chaining language, clauses are linked together within a sentence by non-finite verbal morphology. (See section 8.3 on switch-event markers.) Only the sentence-final verb in the last clause is finite and may be marked for aspect. For a more detailed description of the non-finite/finite distinction see section 5.3.2.1.1 in Chapter 5.

(1) is a sentence which consists of 11 clauses.

- (1) [fuja-Ø]^{CL-1} [GaŋGaŋa-ʒa=dəna]^{CL-2} [əna kuŋ qari-dzi]^{CL-3} [giə-də-na
 tie-SN stretch-CS=DQ this person return-SS house-LC-RP
- [irə=dəna]^{CL-4} [niənda oŋsi-dzi]^{CL-5} [idziə-dzi]^{CL-6} [qau-da=dəna]^{CL-7}
 come=DQ quickly drink-SS eat-SS good-VAS=DQ
- [qudoro-na uku-dzi]^{CL-8} [ətsi=dəna]^{CL-9} [əna 'basi-ni arasuŋ-ni amitu
 knife-RP take-SS go=DQ this tiger-GN skin-AC alive
- [tsoji=dəna]^{CL-10} [aqi-wo.]^{CL-11} F07:41
 peel.off=DQ take-PRF

After stretching [the rope] and tying [him to the tree], the man returned to his home, quickly ate and drank until he was full, took his knife with him, and peeled off the tiger's skin while he was still alive and then took the skin (and left).

The perfective aspect -wo is marked on the sentence-final verb aqi 'take' which is the only finite verb in the sentence. Each of the preceding verbs is non-finite.

8.1.1 Word order within the sentence

The basic sentence structure in Santa is SOV and is illustrated below.

(2) Sentence word order in Santa:

$$S = NP_s (NP_o) V$$

In (2), the sentence consists of an NP subject, an optional NP object and a verb in that order. If a direct object is present, it always precedes the verb. A few examples of simple sentences are shown below.

- (3) “[tʃi]^{NP-S} [hə noʔəi-ni]^{NP-O} [ala-Ø]^V ma!” T2:135
 2SGNM that dog-AC kill-IMPR PRT
“You kill that dog!”
- (4) “ingiə-sə [tʃi-ni nəntʃin-ni]^{NP-O} [mata da=nə.]^V F05:08
 and.so-DL 2SG-GN loving.kindness-AC forget unable=[MP]
“And so I will be unable to forget your loving kindness.”
- (5) ingiə-sə [mutuŋ]^{NP-S} [undu-da-wo.]^V T2:104
 and.so-DL tree tall-VAS-PRF
And so the tree became tall.

Example (3) above is a transitive sentence with a subject NP tʃi ‘you’, a direct object NP hə noʔəi ‘that dog’, followed by a verb ala ‘kill’ in the imperative mood which is zero-marked. The particle ma is an utterance-final emphatic particle.

Example (4) is also a transitive clause, but the subject is understood. The direct object tʃini nəntʃinni ‘your loving kindness’ precedes the verb mata danə ‘unable to forget’. The verb consists of the main verb mata ‘forget’ and an auxiliary verb da ‘unable’ which takes the imperfective aspect marking =nə. ingiəsə ‘and so’ is a sentence-level linker.

Example (5) is an intransitive sentence with a subject NP mutuŋ ‘tree’ and a verb unduda ‘become tall’ in the perfective aspect marked with -wo.

If the direct object NP is case-marked, it may be preposed in front of the subject as in the following example.

- (6) [[sauxu-ni]^{NP-O} [dʒaŋgəi]^{NP-S} [idziə-Ø]^V]^{CL-1} [[agi-wo.]^V]^{CL-2} F06:52
 goat-AC wolf eat-SN take-PRF
The wolf took and ate the goat.

Example (6) differs from the previous example in that it consists of two clauses. The first clause ends with the non-finite verb idziə ‘to eat’ which is

zero-marked. This signals that this verb's temporal/semantic relationship with the following verb is one of integration. The verb in the second clause is aqiwo, which is in the perfective aspect. Stringing clauses together in this manner is one of the distinguishing characteristics of Santa syntax. For more on this see section 8.3.

An example of a ditransitive sentence is given in (7) where the direct object NP niə otçin 'a girl' precedes the verb and the indirect object recipient NP tšimadə 'you' precedes the direct object. The non-finite verb ogi 'to give' is in the desiderative mood, -jə. See section 5.3.2.1.3 in Chapter 5 for more on mood markers.

- (7) [bi]^{NP-S} [tšima-də]^{NP-IO} [niə otçin]^{NP-O} [ogi-jə.]^V A1:141
 1SGNM 2SG-DT one girl give-DES
I will give a girl to you.

Example (8) is similar to (7) above, except the indirect object recipient NP is not mentioned. However, it is understood from the previous context.

- (8) ingiə-sə [ənə niənəi]^{NP-S} [sundzi-nə]^{NP-O} [ogi-wo.]^V A1:057
 and.so-DL this old.woman grandson-RP give-PRF
And so the old woman gave her grandson [to him],

The direct object sundzinə 'her grandson' is unmarked, but word order cues — sundzinə 'her grandson' immediately precedes the verb — and context make it clear that it is the direct object.

8.1.2 Components of the sentence

The major components of the sentence are the noun phrase, discussed in Chapter 7; the postpositional phrase, also discussed in Chapter 7; and clausal elements discussed in section 8.2 below. Please see each of these sections for more detailed accounts of the components of the sentence in Santa.

8.1.3 Copula verbs and copular constructions

In Santa the copula verb is wo. In addition to the indigenous copula verb, there is a borrowed copula verb from Hui Chinese which is si. I will discuss the interaction of these two copula verbs in the following section on the equational construction. I will also discuss the adjectival, existential, and possessive uses of the copular verb wo.

8.1.3.1 The Equational Construction

(9) is an example of the indigenous Santa equational construction.¹³⁰

- (9) [bi]^{NP1} [duŋɕiaŋ kuŋ]^{NP2} wo.
1SGNM Dongxiang person COP.S
I am a Dongxiang (Santa) person.

In the above example, the first NP bi 'I' is being equated with the second NP duŋɕiaŋ kuŋ 'Dongxiang person'. The copula verb wo follows these two NPs.

(10) is an example of the indigenous Chinese Hui equational construction.

- (10) [ŋə]^{NP1} si [duŋɕiaŋ zən]^{NP2}
1SG COP.H Dongxiang person
I am a Dongxiang (Santa) person.

In this case, the copula falls between the two NPs. Although Hui favors SOV word order, the equational construction is SVO.

Strikingly, in Santa the following type of construction, shown in examples (11) and (12), is extremely common.

- (11) [bi]^{NP1} si [duŋɕiaŋ kuŋ]^{NP2} wo.
1SGNM COP.H Dongxiang person COP.S
I am a Dongxiang (Santa) person.

¹³⁰ Untagged examples in this section are from my personal field notes.

- (12) “[tʃiɡaŋ moʔəi]^{NP1} si [luŋwaŋ-ni kəwaŋ]^{NP2} wo.” T6:010
 white snake COP.H Dragon.King-GN son COP.S
“The white snake is the Dragon King’s son.”

In (11) and (12) above, the borrowed Chinese Hui copula occurs between the two NPs. This is significant because a) the Santa copula is still used and b) because the position of the borrowed copula is identical to its position in Hui. The borrowed Chinese Hui copula does not replace the indigenous copula, but rather it occurs between the two NPs, just as it would be in Hui. Therefore, it is not only the copula verb that has been borrowed, but the structure of the equational construction from Hui as well. The result is a hybrid equational construction consisting of two copulas: the borrowed copula *si* and the indigenous copula *wo*. For a similar situation in Baonan, see Li (1983).

The borrowed copula, although common, is optional. Moreover, the indigenous copula may also be omitted. Thus there are four logical combinations of the Santa and Hui copula verbs.

- (13) A. Santa copula only
 B. Hui copula only
 C. Both Santa and Hui copula
 D. Neither copula

My consultant judged all of these possibilities grammatically correct. But examination of the distribution of these types in texts shows that type D does not appear and types A and B are less frequent than type C which is the most common. Example (14) is an instance from a text of the Hui copula appearing without the indigenous copula in an equational construction.

- (14) bi si dunɕiaŋ kuŋ. M4:01
 1SGNM COP.H Dongxiang person
I am a Dongxiang (Santa) person.

The most common usage of the borrowed Chinese copula si when it occurs alone is for it to be followed by a sentential complement as in (15). In this case, the indigenous copula wo cannot be used.

- (15) dziəgo si [ənə kuŋ udzə-sə dziu jama Guəilu da-wo.]⁵ F13:05
 result COP.H this person look-DL then anything change unable-PRF

The result is that after this person looked, he then was unable to change anything.

The frequency of type A (or C) and the frequency of type B may be dependent on the age of the speaker. Young speakers who grew up under the current political situation are typically bilingual and their Santa shows greater Chinese influence. A (or C) may occur in their speech more frequently (Charles N. Li, personal communication).

8.1.3.2 Adjectival use of wo

The copula wo is used as a final verb after predicative adjectives as in (16) and (17). In each case, the copula wo immediately follows the predicative adjective.

- (16) ənə nokian gun wo. T4:017
 this hole deep COP.S

This hole was deep.

- (17) lama kəwəŋ idziə-sən-ni udzə-sə andatu wo. A1:091
 lama boy eat-P.NM-AC see-DL delicious COP.S

The lama saw what the boy ate and that it was delicious.

8.1.3.3 The presentative existential use of wo

The Santa copula is also used in presentative existential constructions. Presentative existential constructions are used to introduce new referents and are frequently found at the beginning of texts. In (18), the existential use of the copula

wo follows the introduction of the referents niə sidzi ‘a lion’ and niə 'basi ‘a tiger’.

- (18) ətɕiə ɡuanɲiŋ-də niə sidzi wo. F07:01
 early time-LC one lion EXST

niə 'basi wo. F07:02
 one tiger EXST

Once upon a time there was a lion and a tiger.

In this example, two existential constructions are used to introduce the two referents. In the first sentence, a temporal NP in the locative case is used to ground the introduction of the referents to a specific time frame. This is a normal, but not obligatory component, of the existential construction. The second sentence in (18) above shows an existential construction that has no explicit temporal phrase. Rather, it is still grounded in the time frame already established in the previous sentence.

(19) is an example of two referents being introduced in the same existential construction.

- (19) ətɕiə-də [niə niənəigie] [niə laudziga] ɡuala wo. A1:001
 past-LC one old.woman one old.man two EXST

Once upon a time there was an old woman and an old man.

8.1.3.4 The possessive use of wo

The possessive use of wo is quite similar to the existential use of wo in that they both introduce new referents. The difference is that the possessive use of wo expresses a relationship of ownership or possession by another referent while the existential construction simply expresses the existence of a referent. In (20) is an example of the possessive use of wo from the same text as the previous example.

- (20) ənə ɣuala-də niə ɣoni wo. A1:003
 this two-DT one sheep have
These two had a sheep.

In this construction, the possessor is in the dative case and the possessed item is unmarked. This is parallel to the existential construction where the temporal NP is in the locative case. Remember that in Santa the dative and locative cases are phonetically identical. Notice that this construction differs from the possessor-possessed construction where the possessor NP is in the genitive case and the possessed NP is the head. The possessive construction described here is used primarily to introduce new referents, while the possessor-possessed construction is not. (See section 7.2.6.4 for more on the possessor-possessed construction.)

Another example is given in (21) which is spoken by a goblin.

- (21) “ma-də ɖolon tɕiɕurun wo.” T4:045
 1SG-DT seven head have
“I have seven heads.”

8.1.4 Other syntactic constructions

In this section, I will briefly discuss question formation in 8.1.4.1 and the adverbial clause construction with ixəu in 8.1.4.2.

8.1.4.1 Question formation

There are two types of question formation in Santa: yes/no questions and question-word questions.

8.1.4.1.1 Yes/no questions

Yes/no questions are formed with the sentence final particle nu.

- (22) “ta gudzi-kan irə nu?” T2:109
 2PLNM fast-INT come QM
“Will you all come faster?”

Tag questions can be formed by placing the irrealis negative marker ulia after nu ‘Q’.

- (23) “imani mədziə nu ulia?” MC:150
 faith know QM I.NEG
Do you know the faith, or not?

8.1.4.1.2 Question-words

Questions can also be formed by using question-words. Some examples are given below.

- (24) “tʃi jələ ɪŋgiə-dʒi ɕiniə=nə?” F11:53
 2SGNM why in.this.way-SS laugh=IMP
“Why are you laughing in this way?”

- (25) “tʃi-ni tɕiaurɯŋ dʒiərə-du hə ʃi jan wo?” F06:41
 2SG-GN head on-P.AS that COP.H what COP.S
“What is that which is on your head?”

- (26) “niənəi, niənəi! tʃi qala ətʃinə?” T2:019
 old.woman old.woman 2SGNM where go=IMP
“Old woman, old woman! Where are you going?”

- (27) “lama, lama, tʃi-ni mori ɕiən dʒiərə usun
lama lama 2SG-GN horse tail on hair

giədun gandzi wo?” A1:047

how.many roots have

“Lama, lama, how many roots does the hair on your horse's tail have?”

- (28) “tʃi ənə guʁaŋ-lə-nə matu giə-dʒi la-ji-dʒi
2SGNM this sheep.kid-CMT-RP how do-SS pull-BVS-SS

giəru+dʒiwo?” F06:05

cross+PROG

“How are you leading you and this kid of yours across [the pasture]?”

8.1.4.2 Adverbial constructions with ixəu

ixəu is borrowed from Chinese yǐhòu and is used to form temporal adverbials. Li & Thompson (1981:633) classify ixəu as a clause-final forward-linking element in Chinese. Its function in Santa is identical. In (29), ixəu follows the verb ətʃi ‘to go’ and shows that the following clause occurs after the preceding clause.

- (29) bi ʃida dzəŋ jawu-dʒi ətʃi ixəu
1SGNM close in.the.process walk-SS go after

ənə kəwaŋ-ni fu-ji-Ø bosì-Ø irə-ka-wo. BH:28-9

this boy-AC help-BVS-SN get.up-SN come-CS-PRF

After walking up closer, I helped the boy to get up.

The modality of the ixəu marked clause may be realis as in (29) above or irrealis as in (30).

- (30) tʂatɕiən quxo ixəu dʒiu dzəŋʂi 'məhəri quxo=nə. MC:047-8
 tea.money give after, then formally betrothal.gifts give=IMP
 *After [he] gives the tea money (engagement money), then the betrothal
 gifts will be given.*

Some more examples are given below.

- (31) xuai dʒiərə quri ixəu sudoro sau-ka. M1:10-11
 kang on go.up after inside sit-CS
 After [they] go up on the kang, [I] make[them] sit inside.
- (32) qu irə ixəu mori niə aji-sə niə tʂa-ji-sə
 go.out come after horse one frightened-DL one surprised-BVS-DL

 niə dzulu xolu-wo. BH:18-21
 one short.while run-PRF

*After [the dog] came out, the horse was a little frightened and a little
 surprised, and ran for a short while.¹³¹*

An extremely important point about this construction is that the verbs immediately preceding ixəu all appear in their non-finite stem form. Another point to consider, is that in these examples, ixəu seems to function syntactically and semantically in a similar manner to -sə, the switch-event marker discussed in 8.3.8.1. An interesting avenue of further investigation would be to see how -sə and ixəu interact.

Finally, I have one example where ixəu occurs clause-initially. In this case, it is backward-linking, not forward-linking as in the previous examples.

¹³¹ qu 'to go out' is a shortened form of quri that precedes some verbs like irə 'to come'.

(33) ʔətɕiə-də niə kuŋ-də ɣuar or qur-dzi ire+dziwo. F13:01
 long.ago-LC one person-LC two horn come.out-SS come+PROG

ənə kuŋ jawu-dzi wəidziən-də ətʂi-sə jə muɣu=nə. F13:02
 this person walk-SS door-LC go-DL also butt=IMP

kuŋ-ni ətʂi-sə jə muɣu=nə. F13:03
 person-AC go-DL also butt=IMP

⇒ ixəu niə fugiə xuaŋniu irə=dənə ɣuar or-ni muɣu=dənə
 after one large ox come=DQ two horn-AC butt=DQ

bau-ɣa-wo. F13:04
 fall-CS-PRF

Long ago, there was a man with horns growing out of his head. Whenever this man went to a door, he would butt it. Whenever he met people, he would also butt them. After this, a large ox came and butted his two horns causing them to fall off.

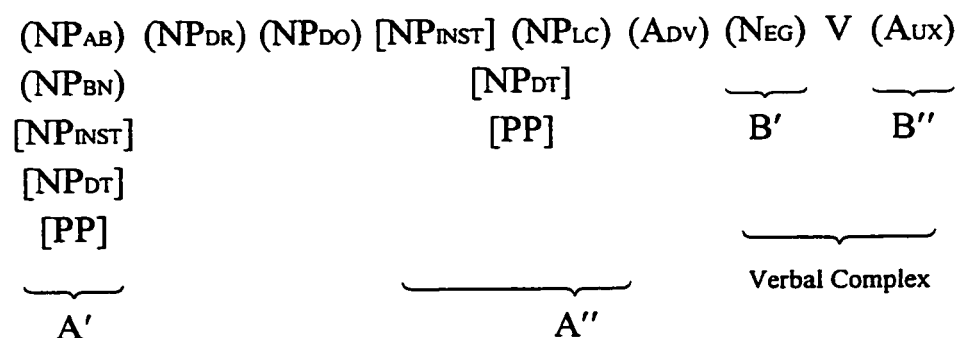
8.2 Clausal elements

In this section I will discuss elements associated with the clause in Santa. In section 8.2.1 I will look at word order within the clause and in section 8.2.2 I will look at the components of the clause.

8.2.1 Word order within the clause

In this section I will give some examples of basic word order within the clause. The basic word order is illustrated in (34).

(34) Basic word order within the clause:



The verb is the only obligatory item in the clause. All others are optional.

Within the verbal complex, if there is a negative marker, it will immediately precede the verb. If there is an auxiliary verb, it will immediately follow the verb. B' and B'' stand for mutually exclusive categories. If the auxiliary verb is dā 'to be unable', then it may not co-occur with a negative marker that precedes the verb.¹³² Adverbs usually immediately precede the negative marker. For more discussion about the verbal complex, see section 5.3.2 in Chapter 5.

The order of phrases before the verb is more complicated. It is easiest to start with the direct object NP and first look at what may occur after it. Locative NPs always immediately precede the verb. I have found no exceptions to this.¹³³ Instrumental NPs may occur after a direct object NP and before a locative. Dative NPs or postpositional phrases may occur after the the direct object NP and before the verb. However, I am unclear whether dative NPs or postpositional phrases may co-occur with either a locative or an instrumental NP following a direct object.

I have used square brackets in (34) above to indicate that a phrase may occur in either one slot or the other. Any given phrase may not occur in both slots

¹³² However, if the auxiliary is qiā 'to do', which derives disyllabic Chinese verbs, then it may occur with a negative marker.

¹³³ The only apparent exception to this is the presentative existential construction. See discussion in section 8.1.3.3 above.

at the same time. Thus A' and A'' are mutually exclusive. Another way of saying this is that an instrumental NP may not occur in both A' and A'' at the same time. This does not exclude NPs of different types occurring in both A' and A'' at the same.

Thus, a dative NP may occur in A' or A'', and a postpositional phrase may occur in A' or A''. The ablative and the benefactive NP may only occur in the A' slot. In addition to this, a durative NP may occur directly preceding the direct object NP.

Several examples of word order within the clause are given below.

- | | | | | | | | |
|------|--|-----------|---------|------|------|------------|--------|
| | | NP-S | NP-Do | Adv | V | Aux V | |
| (35) | iŋ-giə-sə | kuŋ-la | tərə-ni | dʒiu | udzə | da=nə. | F13:09 |
| | this.way-do-DL | person-PL | 3SG-AC | then | look | unable=IMP | |
| | <i>And so people could not then bear to look at him.</i> | | | | | | |

- | | | | | | | |
|------|--|--------|------------|-----------------|-----------|--------|
| | NP-S | NP-Do | NP-Inst | NP-Lc | V | |
| (36) | “bi | tʃi-ni | dzaʃi=gala | [ənə muturŋ-də] | fujə-jə.” | F07:37 |
| | 1SGNM | 2SG-AC | cord=INST | this tree-LC | tie-DES | |
| | <i>“I want to tie you with a cord to this tree.”</i> | | | | | |

- | | | | | | | |
|------|--|----------------|------------|--------------------|--------------|-------|
| | | NP-Inst | | NP-Do | V | |
| (37) | “[mi-ni | ənə səikəŋ | ciən=gala] | [tʃi-ni nudurŋ-ni] | arundza-jə.” | T8:18 |
| | 1SG-GN | this beautiful | tail=INST | 2SG-GN eyes-AC | exchange-DES | |
| | <i>“[I] want to exchange your eyes for this beautiful tail of mine.”</i> | | | | | |

- | | | | | | |
|------|---|-------------|--------|--------------------|-------|
| | NP-S | NP-Ab | NP-Dt | V | |
| (38) | tʃi | baŋ-sə-nə | ma-də | [niə idʒiə-ka-Ø].” | T2:33 |
| | 2SGNM | honey-AB-RP | 1SG-DT | one eat-CS-IMPR | |
| | <i>“Let me eat a little from your honey.”</i> | | | | |

- (39) NP-S NP-Bn NP-Dr NP-Do V
 bi [ɣadanə kuŋ-la-də] [ʃiwu nian] uilɿə ɣiə-wo. N2:020
 1SGNM outside person-PL-BN fifteen year work do-PRF
I worked for outside people for fifteen years.

- (40) NP-S
 niə xoŋ-də=ni [bidziən ɣuraŋ kuŋ]
 one year-LC=TM 1PLEXNM three person

- NP-Dr NP-Do NEG V
 [ɣur-udu ɣuraŋ ɕiəni] idziə-wu-ni əsə idziə-wo. N2:022
 three-day three night eat-I.NM-AC R.NEG eat-PRF
One year, we three people for three days and three nights did not eat anything.

- NP-Dt NP-Do V
 (41) iŋɣiə [ənə kəwaŋ-də] [sanʃi lian antaŋ] oɣi-wo. A1:143
 and.so this boy-DT thirty MW:tael gold give-PRF
And so [he] gave this boy thirty tael of gold.

- (42) lama ɣoroŋ-la-ni ʃu-dzi aru-ka=də
 lama courtyard-PL-AC sweep-SS clean-CS=DQ

- NP-Do NP-Dt V
 [niə tuɣoŋ taɣaŋ-ni] noɣəi-də idziə-ka-wo. A1:100
 one bowl noodles-AC dog-DT eat-CS-PRF
Once the lama swept the courtyards clean, he made the dog eat a bowl of noodles.

- (43) PP NP-Do V
 [tʃigəŋ dʒiərə] ɕiaukə dʒo+dzɪwo. N1:057
 ear on earring wear+PROG
[The Santa women] are wearing earrings on the ears

- (44) NP-Do PP V
 kəwaŋ-ni [kuan dəura-nə] kidziə-ɣa-wo. A1:063
 boy-AC feet below-RP sleep-CS-PRF
[The lama] made the boy sleep below his own feet.

8.2.2 Components of the clause

In this section I will be only be discussing adverbs and adverbials. For discussion of verbs and the verbal complex, see section 5.3.2 in Chapter 5. For discussion of negation, see section 5.3.2.2 in Chapter 5. For discussion of auxiliary verbs, see section 5.3.2.3 in Chapter 5.

8.2.2.1 Adverbs and adverbials

Adverbs and adverbials are not necessarily confined to the clause in Santa. Although many of these adverbials may function on the sentential level as well, I will discuss them here. In this section I will look at temporal adverbials, aspectual adverbials, and manner adverbials.

8.2.2.1.1 Temporal adverbials

Temporal adverbials are quite common. Nominals such as maɣaʃi ‘tomorrow’, futʃukudu ‘yesterday’, and niudu ‘today’ occur sentence-initially as in (45) or after the first NP as in (46). Although grammatically nouns, they function as temporal adverbials here and serve to ground the utterance in a specific temporal setting.

- (45) “maḡasi tʃi təula-dʒi aɡi da-sə,
tomorrow 2SGNM count-SS take unable-DL

bi tʃi-ni ala=nə.” A1:026

1SGNM 2SG-AC kill=IMP

“Tomorrow, if you are unable to take count, I will kill you.”

- (46) “tʃi futʃuxudu mi-ni amiŋ-ni dʒiu-ji-sə
2SGNM yesterday 1SG-GN life-AC save-BVS-DL

ada=mi-ni bjasu+dʒiwo.” T6:019

papa=1SG-GN be.happy+PROG

“Because you saved my life yesterday, my papa is very happy.”

The aforementioned temporal adverbials do not take the temporal clitic =ni. Other NPs serving as temporal adverbials may take this marker which apparently marks an important or salient time reference or change in the text. An example of the use of this marker with a temporal NP is given in (47) where quatʃi uduni ‘the next day’ is the temporal NP. NPs like this occur most frequently sentence-initially.

- (47) quatʃi udu=ni lama gojə-nə ɡiə saxi-wo. A1:098
next day=TM lama self-RP house wait-PRF
The next day the lama himself waited at the house.

Another example is given below where niə ududəni ‘one day’ is serving as a temporal adverbial. Notice that it is in the locative case as well as being marked with =ni.

- (48) niə udu-də=ni manan ʊla-də tori-lə ətʃi-wo. T8:04
one day-LC=TM zokor mountain-LC stroll-SP go-PRF
One day the zokor went for a stroll on the mountain.

Other adverbials which are not nominal in nature may also serve as temporal adverbials. ədə ‘now’ is generally used for contrastive purposes and usually occurs sentence-initially. An example is given below.

- (49) ədə mi-ni ki-də dʒiəronɔŋ gandzi gondʒiliə wo. N2:114
 now 1SG-GN house-LC four CL:long.thin quilt have
Now my house has four quilts.

8.2.2.1.2 Aspectual adverbs

There are a number of adverbs in Santa which serve to clarify, emphasize, or restate the aspectual nature of the predicate. These adverbs include idzɪn ‘already’, dʒən ‘in the process’, ibəidzi ‘always’, dau ‘still’, and pəsə ‘again’. Of these, only pəsə ‘again’ is not borrowed from Chinese.

The adverb idzɪn ‘already’ is used to emphasize the fact that an action is completed. Thus its use correlates with the perfective aspect. This adverb immediately precedes the action it is modifying as in (50) where it precedes the verb suruwo ‘learned’ which is in the perfective aspect.

- (50) “ənə jaŋ-nə jama puʃi wo. MP:34-5
 this what-RP anything COP.NEG COP.S

idzɪn suru-wo.” MP:36

already learn-PRF

“This thing of his isn’t anything. I’ve already learned it.”

The adverb dʒən clarifies that the following action is still in process. Its use correlates with the progressive aspect. In (51) below, there is no aspectual marking on the verbs jawu ‘to walk’ and ətʃi ‘to go’, but the adverb clarifies that the action is to be viewed as ongoing. It is unclear to me at this point to what extent dʒən has been lexicalized.

- (51) bi şida dzən jawu-dzi ətşi ixəu,
 1SGNM close in.the.process walk-SS go after

ənə kəwaŋ-ni fu-ji-Ø bosı-Ø irə-ka-wo. BH:28-9
 this boy-AC help-BVS-SN get.up-SN come-CS-PRF
After walking up closer, I helped the boy to get up.

The adverb ibəidzi ‘always,’ shows that an action does not have a foreseeable endpoint. Its use correlates with the imperfective aspect. In both (52) and (53), ibəidzi ‘always’ precedes the action it is modifying and emphasizes that the action is ongoing without a foreseeable endpoint.

- (52) bi ənə unuŋ-ıa-nə ibəidzi ıa-ji-dzi giəru da=nə. F06:06
 1SGNM this goat.kid-PL-RP always drag-BVS-SS cross unable=IMP
I am always unable to drag my kids across [this pasture].

- (53) bi ɣuŋtʂaŋdaŋ-ni ɣau-ni ibəidzi
 1SGNM Communist.Party-GN loving.kindness-AC always

mata da=nə. N2:132

forget unable=IMP

I will always be unable to forget the loving kindness of the Communist Party.

The adverb dau ‘still, yet’ is used to emphasize that an action is ongoing as in (54), or that it is something that has occurred once more as in (55). It precedes the action or referent it is modifying.

- (54) “tşi dau mədziə da+dziwo.” F07:55
 2SGNM still know unable+PROG
“You still do not know.”

- (55) bi dau niə kuŋ-sə wu kuai bəə la-ji-wo. N2:047
 1SGNM still one person-AB five MW money borrow-BVS-PRF
I borrowed five dollars from yet another person.

The adverb pəsə ‘again, still, yet’ is probably the most commonly used adverb in Santa. It is used to specify that an action or set of circumstances has occurred again. The adverb pəsə ‘again, still, yet’ precedes the action it is modifying, but as can be seen in (57), if the verb which it is modifying contains an object, it precedes the direct object as well.

- (56) ənə guala mutuŋ dʒiərə quri=dənə pəsə kiəliə, ... T2:099
 this two tree on go.up=DQ again say
After these two went up the tree, they speak once more, ...

- (57) ənə kuŋ pəsə niə biəri aɡi-wo. A2:003
 this person again one wife take-PRF
This person again took a wife.

In (58), the meaning of pəsə is closer to ‘yet’. pəsə precedes the NP niə duja ‘a world’ which is being introduced by the presentative existential construction with the verb wo.

- (58) bau-dʒi ətʃi-sə hə nokien-də pəsə niə duja wo. T4:022
 fall-SS go-DL that hole-LC again one world EXST
After falling down, in that hole there was yet another world.

8.2.2.1.3 Manner adverbials

Manner adverbials are mainly expressed by means of reduplication and the Chinese particle de, phonetically dʒi in Santa. The manner adverbial construction in Santa is identical to the Chinese manner adverbial construction and has certainly been greatly influenced by it. Some examples from Mandarin Chinese are given below from Li & Thompson (1981).

- (59) tā kuài-kuài-de zǒu. (Li & Thompson 1981:323)

3SG quick-quick-DE walk

"S/He walked quickly."

- (60) nèi-ge zhōng dīngdāng-dīngdāng-de xiǎng. (Li & Thompson 1981:328)

that-CL bell dingdong-dingdong-DE make.noise

"That bell makes noise in a dingdong-dingdong manner."

Although there are many manner adverbials in Bu (1983) which are composed of non-onomatopoeic items, all of the examples I have from my texts are onomatopoeic in nature. There are some examples of non-onomatopoeic adverbials in section 5.2.13 in Chapter 5.

In example (61), t̚sa-t̚sa=d̚zi is a manner adverbial and precedes the verb d̚ziəuli 'to jump' which it is modifying.

- (61) d̚ziʃi t̚sa-t̚sa=d̚zi d̚ziəuli-Ø t̚ci-ji-wo. MP:67-8

only ONOM-ONOM=DE jump-SN begin-BVS-PRF

[He] just began to jump around 'cha-cha' like.

Example (62) is a little different in that the reduplication of irəu has a syllable-initial consonant /t̚/ in t̚cirəu. irəut̚cirəud̚zi is modifying the verb wəila 'to cry' which it is preceding.

- (62) jawu-Ø wəila-d̚zi ʃənt̚ci tai-d̚zi irəu-t̚cirəu=d̚zi wəila=nə. MC:297

walk-SN cry-SS voice let.go-SS ONOM-ONOM=DE cry=IMP

"As [she] is walking and crying, [she] lets out a cry in an 'irəu t̚cirəu' manner."

Finally (63) and (64) below show that the particle d̚zi in fact is not obligatory. This is the same in Chinese. These two examples are taken from the same text. Example (64) is a repetition of the same words spoken earlier in the story in (63). In (64) where the words are repeated, the particle d̚zi does not

appear. In addition, notice that the adverbial guruguru(dzi) is modifying the demonstrative pronoun hə ‘that’.

- (63) “tʃi-ni guru-guru=dzi hə ʃi jaŋ wo?” F06:14
 2SG-GN ONOM-ONOM=DE that COP.H what COP.S
“Your ‘guru-guru’ thing is what?”

- (64) “tʃi-ni guru-guru hə ʃi jaŋ wo?” F06:39
 2SG-GN ONOM-ONOM that COP.H what COP.S
“Your ‘guru-guru’ thing is what?”

8.2.3 Nominalized clauses

There are three markers that are used to nominalize a verb within a clause in Santa: -sən ~ -sən; -ku ~ -wu; and -tʃəŋ. Nominalized verbs function differently from nouns derived from verbs (discussed in section 5.2.1 in Chapter 5) in that nominalized verbs are distinguished for aspect.

Table 8.43 shows the nominalized verb complex. One of three nominalizers may be attached directly to the verb stem, or to a verb stem that is marked with the causative suffix. Notice that verbs with the collective/reciprocal marker may not be nominalized. (Compare Table 8.43 with Table 5.2 and Table 5.3 in Chapter 5.)

Stem	Causative	Nominalizer
	Causative	Perfective Imperfective Progressive

Table 8.43: Nominalized verb complex

When a verb is nominalized in Santa, it may have associated arguments as well. Therefore, it is the clause that is being nominalized, and not just the verb. Some examples are given below.

- (65) “maʔaʃi tʃi-ni qara dʒiən musi-sən kun çiŋ-la-la irə-sə
tomorrow 2SG-AC black clothes wear-P.NM person invite-VS-SP come-DL

tʃi bu ətʃi-Ø. T6:011
2SGNM IMPR.NEG go-IMPR

tʃiGəŋ dʒiən musi-sən kun irə-sə tʃi ətʃi.” T6:012
white clothes wear-P.NM person come-DL 2SGNM go-IMPR

“If you are invited by a person who has worn black clothes, do not go! If it is a person who has worn white clothes, you go!”

- (66) lama kəwən idʒiə-sən-ni udʒə-sə andatu wo. A1:091
lama boy eat-P.NM-AC see-DL delicious COP.S
The lama saw what the boy ate and that it was delicious.

In (65), the clause qara dʒiən musi ‘wear black clothes’ and the clause tʃiGəŋ dʒiən musi ‘wear white clothes’ have both been nominalized with the perfective nominalizer -sən. In each case, the direct object of the verb musi ‘to wear’ is present.

In (66), the clause kəwən idʒiə ‘boy eat’ has also been nominalized with the perfective nominalizer -sən. In this case, the subject of the verb, kəwən ‘boy’, is present.

In addition to subjects and objects, postpositional phrases may also be part of the nominalized clause as in the example below where tɕiɕauruŋ dʒiərə ‘on the head’ precedes the verb xoro ‘to wind, to roll up’.

- (67) tɕiauruŋ dziəɾə xoro-ku ʃi dəsida wo. N1:045
 head on wind-I.NM COP.H head.wrapping COP.S
What is wound on the head is a head wrapping.

In each of these examples, the nominalized clause is serving a different function. In (65), the nominalized clauses are used to restrict the referent of the head noun. Thus these look and function like relative clauses. In this case the subject kuŋ ‘person’ is being relativized.

In (66) the nominalized clause is an argument of the verb udzə ‘to see’ and is case-marked in the accusative.

In (67), the nominalized clause is in the NP1 position preceding the borrowed Chinese copula in an equational construction. For more on the equational constructions, see section 8.1.3.1 above.

Thus, in each of these cases, the nominalized clause is used differently. In my database, about 24% of the nominalized verbs co-occur with a head noun and might be interpreted as relative clauses. However, as I have already shown, this is not the primary function of nominalized clauses. Another point is that nominalized clauses are often case-marked. In my database, around 47% of all nominalized verbs are case-marked. A large portion of these are verbs nominalized with -ku ~ -wu, the imperfective nominalizer. But -san ~ -sən, the perfective nominalizer, is case marked around 24% of the time. Nominalized clauses warrant further investigation, but for now, I will briefly discuss each of the markers below.

8.2.3.1.1 Perfective nominalizer -san ~ -sən

The perfective nominalizer -san ~ -sən is used to nominalize clauses which characterize completed actions that have a definite endpoint. In (68), the verb kidziə ‘to sleep’ is nominalized with -san and describes a situation that is no longer true in the present. The nominalized clause in this case precedes the borrowed Chinese copula in an equational construction.

- (68) kidzia-sən ʃi tʃanpai xuai wo. N2:061
 sleep-P.NM COP.H matless.adobe kang COP.S
What I slept on was a matless adobe kang.

In (69), the nominalized verb fugusən is modifying the head noun kun ‘person’. Morphosyntactically, however, fugusən is a noun meaning something like ‘dead one’ and together with kun ‘person’ forms a noun compound.

- (69) mo dziəɾə ətʃi=də ɕiaŋdzi-ni niə-sə niə fugu-sən kun wo. A1:122
 road on go=DQ chest-AC open-DL one die-P.NM person EXST
After going on the road, [they] opened the chest, and there was a dead person in it.

In (70), the nominalized clause goni ɕiən biəndzisen ‘sheep’s tail changed’ is being equated with bi ‘I’. The perfective nominalizer is used because the change is complete.

- (70) “niənəi, niənəi,
 old.woman old.woman

 bi ʃi hə goni ɕiən biən-dzi-sən wo.” A1:031
 1SGNM COP.H that sheep tail change-BVS-P.NM COP.S
 “Old woman, old woman, I am the changed one from that sheep’s tail .”

As mentioned above, verbs with the causative marker may be nominalized. In (71), the verb stem dziəxuairə ‘to become poor’ is a verb derived from an adjective. The perfective nominalizer follows the causative suffix -ɣə.

(71) janjin ši gomindan fandunpai xo dzidzu-la
 reason COP.H Nationalist.Party reactionaries and landlord-PL

japai bocia giə-dzi dziaxuəi-ra-ka-san wo. N2:034
 repress exploit do-SS poor-VAS-CS-P.NM COP.S

The reason is that the Nationalist Party reactionaries and the landlords have been repressing and exploiting [us] causing us to be the poor ones.

Nominalized clauses may also be marked for case. In (72), the nominalized verb irəsənni is in the accusative case because it is the object of the verb medziə dadziwo ‘to be unable to know’. See section 5.3.2.3.1 for more on the auxiliary verb da ‘to be unable’.

(72) ənə kəwan qala-sə irə-sən-ni mədziə da+dzıwo. T6:050
 this boy where-AB come-P.NM-AC know unable+PROG

This boy is unable to know where all the things came from.

In (73), is an example of a nominalized verb in the locative case. This usage is apparently lexicalized from the verb giəru ‘to cross’ because giərusandə ‘in the past’ is found as a dictionary entry in Bu He (1983).

(73) giəru-san-də bi dziu imutu nančin wo. N2:122
 cross-P.NM-LC 1SGNM then this.way difficult COP.S

In the past, I was in this kind of difficulty.

8.2.3.1.2 Imperfective nominalizer -ku ~ -wu

The imperfective nominalizer -ku ~ -wu is used to nominalize verbs and clauses which characterize uncompleted actions that may or may not have commenced yet. In (74), the clause kuan dziərə musiku ‘to wear on the feet’ is nominalized with the imperfective nominalizer to show that the ‘wearing’ has not necessarily commenced yet.

- (74) kuan dziərə musi-ku ʃi məsiə wo. N1:046
 foot on wear-I.NM COP.H leather.socks COP.S
For wearing on the feet are leather socks.

In (75), the nominalized clause matən guala ənə mo dziərə irəkudə ‘we two were coming on this road’ is in the locative case. The locative case is used with the imperfective nominalizer to express ‘when’ or ‘during’ the action of the nominalized clause.

- (75) “matən guala ənə mo dziərə irə-ku-də
 1PLINNM two this road on come-I.NM-LC
hə dziən-nə tai=dənə dziən-də-nə bosun ala+dziwo.” F07:11
 3SGNM clothes-RP take.off=DQ clothes-LC-RP louse kill+PROG
“When we two were coming on this road, he was taking off his clothes and killing the lice on them.”

In (76), the nominalized clause mutun dziərə qurikuni ‘going up trees’ is in the accusative case because it is the object of the verb sukə ‘to teach’. The imperfective nominalizer was used because it is an action that has not commenced yet.

- (76) “tʃi jalə mutun dziərə quri-ku-ni ma-də
 2SGNM why tree on go.up-I.NM-AC 2SG-DT
əsə su-ka-wo?” F05:19
 P.NEG learn-CS-PRF
“Why didn’t you teach me tree-climbing?”

In (77), both the accusative and the locative case occur on the nominalized verb idziəkunidə. Although this is a description of a situation that occurred in the past, the imperfective nominalizer is used because the things to eat are unrealized.

- (77) idzia-ku-ni-da lidali nančin-no wo. N2:025
 eat-I.NM-AC-LC truly difficult-very COP.S
When I wanted to eat something, it was truly very difficult.

In (78), the nominalized clause ulia oqiwusə ‘not give’ is in the ablative case.

- (78) “tši ətši-sə ulia oqi-wu-sə aji=nə.” T5:22
 2SGNM go-DL I.NEG give-I.NM-AB afraid=IMP
“If you go, I will be afraid from not giving.”

The reflexive/possessive marker -nə can also be used with nominalized verbs as shown below.

- (79) ətši-wu-da-nə otčin-la-da-nə kialia, ... T2:013
 go-I.NM-LC-RP daughter-PL-DT-RP say
At her going she says to her daughters, ...

As mentioned above, the stem of the nominalized verb may appear with the causative marker. In (80), the verb udzəḱaku is marker with the causative suffix and means ‘a place to be seen (by a doctor)’.

- (80) udzə-ḱa-ku oronj u wo. N2:118
 see-CS-I.NM place NEG have
[We] did not have a place to be seen (by a doctor).

In (81) through (83) are some lexicalized uses of the imperfective nominalizer -ku found in Bu He (1983).

- (81) dzəḱərə-ku ‘disgusting things, nasty things’
 from dzəḱərə ‘to loathe, to be disgusted with’
 (82) dziausi-ku ‘cotten-padded mattress, cushion’
 from dziausi ‘to pad (a mattress)’
 (83) nadu-ku ‘toy, play thing’ from nadu ‘to play’

8.2.3.1.3 *Progressive nominalizer -tsən*

The progressive nominalizer -tsən is used to nominalize verbs and clauses which characterize an ongoing event relative to a specific event frame. In (84) nəŋgəudə kurutsən is nominalized signifying one who has enough resources at that time. In this case the nominalized clause is modifying the head noun kun ‘person’.

- (84) nəŋgəu-də kuru-tsən kun goni iman fugiə
financial.resources-LC be.enough-PR.NM person sheep goat cow

dzəru-dzi əjə giə=nə. N1:027
slaughter-SS festival do=IMP

The person who has enough financial resources will slaughter a sheep, a goat, and a cow for the festival.

In (85) is another example where the nominalized clause xodzi sautsən shows that the process of the hired laborer living-in continues.

- (85) ənə xodzi sau-tsən kun dʒiu imutu lolian wo. N2:085
this hired.laborer live-PR.NM person then this.way oppressed COP.S

The hired laborer who is living-in then in this way is oppressed.

In both (84) and (85) above, the nominalized clauses are modifying the head noun kun ‘person’. In (86), gua nasu olutsən ‘two-year-old’ precedes the NP niə otçindənə ‘for my one daughter’. The progressive nominalized verb indicates that the daughter continues to be two years old at that point in time.

- (86) bi gua nasu olu-tɕən niə otɕin-də-nə niə udu
 1SGNM two year become-PR.NM one daughter-DT-RP one day

gua kodzi jaju ʃira-dzi idziə-ɣa+dziwo. N2:024
 two MW:small.round potato roast-SS eat-CS+PROG

One day I was roasting two small potatoes for my one daughter who is two years old to eat.

In example (87) are some lexicalized uses of the progressive nominalizer -tɕən found in Bu He (1983). These lexicalized instances have probably arisen through the dropping of the head noun, usually kun ‘person’, with which they were associated.

- (87) dəula-tɕən ‘singer’ from dəula ‘to sing’
 goji-tɕən ‘begger’ from goji ‘to borrow’

In addition, some nominalized clauses with direct objects have been lexicalized as well as the examples below show.

- (88) dzakasun bari-tɕən ‘fisherman’
 from dzakasun bari *lit.* ‘fish catch’
 (89) wəidziən saki-tɕən ‘doorkeeper’
 from wəidziən saki *lit.* ‘door wait’

The marker -tɕən may also be used with borrowed Chinese verbs as in the example below.

- (90) kə-ji-tɕən ‘engraver’
 (from Chinese kè ‘to engrave’ + -ji ‘BVS’)

Notice that the BVS suffix -ji follows the verb and the derivational marker -tɕən follows that. The BVS suffix -ji is discussed in section 5.2.5.1.1 in Chapter 5.

8.3 A Study in Switch-Event Markers¹³⁴

In this section, I will discuss the Santa switch-event (non-finite verbal) markers. Clause chaining is one of the major strategies for encoding both single and multiple events in Santa. Mongolic languages have not been previously recognized as clause chaining languages *per se*. Therefore, my first objective will be to demonstrate that Santa is, in fact, a clause chaining language.

One of the distinctive features said to accompany clause chaining languages is *switch-reference* (Longacre 1985). In section 8.3.5, however, I will argue that switch-reference is not the relevant distinction in Santa, but rather *switch-event*.¹³⁵ In Santa, switch-event markers are suffixed to non-finite medial verb forms. (See section 5.3.2.1.1 in Chapter 5 for discussion on non-finite vs. finite and medial vs. final verbs.) My second objective will be to discuss the non-finite verbal markers and the function and distribution of each of them and any syntactic restrictions that may accompany them. The set of non-finite medial verb markers in Santa includes: -sə, =dənə, -dzi, -lə, +sənu, and -talə.¹³⁶ Each of these markers will be discussed in detail below.

Furthermore, medial verbs may appear as bare verb stems with zero-marking -Ø. Because unmarked medial verbs are in a paradigmatic relationship with the other medial verbs carrying overt switch-event markers, I will consider zero-marking to be a type of switch-event marking as well.

The database for this study includes seven Santa folktales¹³⁷ which contain 611 verbs, of which 269 are non-finite and 294 are finite. There are 48 other non-finite verbs which include 17 nominalized verbs and 31 instances of the

¹³⁴ This section is adapted from an unpublished manuscript, *Clause Chaining in Dongxiang: A Study in Medial Verb Morphology* (Field 1992).

¹³⁵ I will be using the term switch-event throughout my discussion in this section. I will define and motivate the use of this term later on in my discussion.

¹³⁶ The stress assignment on -talə is unknown due to lack of spoken data on this item.

¹³⁷ These texts are MP, F05, F06, F07, F08, F11, and F13 and are discussed in more detail in Chapter 2.

borrowed Chinese copula *ši*. Since these verbs take neither medial or final verb morphology, they have been excluded from the discussion except where noted. This breakdown is illustrated in Table 8.44.

Verb type	#	%
Non-finite verbs	269	44
Finite verbs	294	48
Other non-finite verbs	48	8
Total	611	100

Table 8.44: Verb types in seven Santa folktales

The high percentage of non-finite verb forms in this database, 44%, is indicative of their relative importance in Santa for encoding events. This section will concentrate primarily on these non-finite verb forms but some discussion of the finite verb forms will be included where relevant.

8.3.1 Santa as a clause chaining language

The sentence in Santa frequently consists of more than one verb. For what I consider to be the *sentence* in Santa, see section 8.3.6.2. In the database for this short study, 58% of the sentences have more than one verb.¹³⁸ The distribution of single and multiple verb sentences is illustrated in Table 8.45.

¹³⁸ These counts include the 17 nominalized verbs and the 31 instances of the borrowed Chinese copula.

	#	%
Sentences with one verb	129	42
Sentences with two verbs	102	33
Sentences with three verbs	43	14
Sentences with four verbs	18	6
Sentences with five verbs	6	2
Sentences with six verbs	2	0.7
Sentences with seven verbs	4	1
Sentences with eleven verbs	1	0.3
Total	305	100

Table 8.45: Distribution of single and multiple verb sentences in the database

A sentence with more than one verb is given in example (91).

- (91) “bi ṭʃi-ni bari-sə ḍziəku niə sə-ji-dzi
 1SGNM 2SG-AC take-DL rope one make.rope-BVS-SS

ḍziəuliəḍzi=dənə iḍziə=nə.” F06:66

hang.up=DQ eat=IMP

“After I catch you, I will make a rope and hang you up, then I will eat you.”

This example contains four verbs: bari ‘to take’, səji ‘to make a rope’, ḍziəuliəḍzi ‘to hang up’, and iḍziə ‘to eat’. The first three verbs are non-finite and each has a different non-finite marker: -sə, -dzi, and =dənə respectively. The fourth and last verb iḍziə ‘eat’ is the only verb marked for aspect, in this case the imperfective aspect =nə. This is the only finite verb in the sentence. The finite verb always occurs sentence-finally since Santa is an SOV language.

Khalkha, the standard language of Mongolia, exhibits the same syntactic restrictions in a sentence where the last verb is finite and the preceding verbs are non-finite and marked with a limited set of suffixes. Previous descriptions of

Khalkha have referred to these non-finite verb forms with various terms; *converbial particles* by Street (1963), *converbs* by Bosson (1964) and Hangin (1968), *gerunds* or *converbs* by Poppe (1970), and *converbals* by Binnick (1979). Bosson's 1964 *Modern Mongolian* says, '... these forms do not occur independently of another verb, and are never used as predicates. They signify a coordinate or a subordinate action that either parallels or modifies the action of the main verb (Bosson 1964:55).'

Chinese scholars writing on Santa (Liu 1981, Bu 1986, A Ibrahim 1987) call these fūdòngcí or adverbial participles which are actions that modify, complement, or are coordinated with the main verb (Liu 1981:64).

Longacre, however, (1985) identifies constructions of this type as chaining structures while contrasting these with co-ranking structures. According to Longacre, 'In co-ranking structures . . . it is possible to have several verbs of the same rank, commonly referred to as independent clauses. Thus, we can speak of a sentence as consisting of a coordination of independent clauses (Longacre 1985:238).' English is a typical language that commonly employs co-ranking structures. Longacre goes on to differentiate chaining structures from co-ranking structures. 'In a chaining structure, on the other hand, it is simply not possible to combine two verbs of the same rank in the same sentence. A sentence typically ends in a dominating verb of fuller structure than any of the preceding verbs. These preceding verbs are commonly referred to as medial verbs while the dominating verb at the end is known as the final verb (Longacre 1985:238).'

Thus by Longacre's definition, Santa is a clause chaining language, not a co-ranking one. This is because Santa allows only one finite verb per sentence, while any number of verbs may appear before the finite verb, but they cannot be marked for aspect. Aspect is marked only on the last verb. So referring back to example (91) above, we can now see that the first three verbs are medial verbs, in Longacre's terminology, and the fourth and last verb is a final verb because it is the only verb marked for aspect and because it occurs sentence-finally where the main verb occurs in Santa.

Before we move on, I need to take into account the recent discussion of converbs (Haspelmath & König 1995) and how this relates to Santa.

8.3.2 Medial verbs vs. converbs in Santa

As mentioned above, non-finite verbs in Mongolic languages have been traditionally described in terms of converbs (Street 1963, Bosson 1964, Hangin 1968, Poppe 1970, Binnick 1979). Many of the articles in Haspelmath & König (1995), editors of *Converbs in Cross-Linguistic Perspective*, also treat Mongolic non-finite verb forms as converbs. Haspelmath (1995) addresses the issue of the differences between converbs and medial verbs in the opening chapter of Haspelmath & König (1995). The major difference, according to Haspelmath, is that clauses containing converbs are subordinate to the clause containing the finite verb, while clauses that contain medial verbs are cosubordinate to the clause containing the finite verb (Haspelmath 1995:26). Foley and Van Valin (1984:242) introduced the term cosubordinate to capture the fact that clauses with medial verbs are dependent, since they must co-occur with a main verb, but not embedded. Clauses with converbs are also dependent, but in contrast to medial verbs, are embedded. Haspelmath (1995:12) gives the following criteria for distinguishing subordinate clauses from coordinate (main) clauses:

Criteria for subordination:

- a. clause-internal word order
- b. variable position
- c. possibility of backwards pronominal anaphora (i.e. pronominal cataphora) and control
- d. semantic restrictiveness, and hence focusability
- e. possibility of extraction

If these criteria are applied to Santa, it becomes clear that clauses containing non-finite verb forms are not subordinate.

For point A, clause-internal word order, Haspelmath (1995:12) shows that a converb clause may appear within the superordinate clause making it

discontinuous. However, in Santa, this is never the case. A clause with a non-finite verb form in Santa never makes the superordinate or main clause discontinuous. If a subject is explicitly expressed in a clause, it must be the subject of the verb that immediately follows it. If the main verb does not have an explicitly expressed subject, then it is implicit from the context of the immediately preceding verb.

For point B, variable position, Haspelmath (1995:13) shows that subordinate clauses with converbs may precede or follow the main clause. In my database, there are no examples of non-finite clauses following the main clause.

For point C, possibility of backwards pronominal anaphora and control, Haspelmath (1995:14) shows that subordinate clauses with converbs may contain instances of backwards pronominal anaphora and control. In Santa, however, this situation is not possible and does not occur in my data.

For point D, restrictiveness and focusability, Haspelmath (1995:15) shows that subordinate clauses may be interpreted restrictively, but coordinate clauses may not. In other words, subordinate clauses may be used to restrict the reference of the main clause. In Santa, one can find cases where non-finite verbs are used to restrict the reference of the main clause as in the example below.

(92) ʔətɕiə-də niə kuŋ-də ɣuɑr or qur-dzi ire+dziwo.
 long.ago-LC one person-LC two horn come.out-SS come+PROG

ənə kuŋ jawu-dzi wəidziən-də ətɕi-sə jə muku=nə.
 this person walk-SS door-LC go-DL also butt=IMP

kuŋ-ni ətɕi-sə jə muku=nə. F13:01-3
 person-AC go-DL also butt=IMP

Long ago, there was a man with horns growing out of his head. Whenever this man went to a door, he would butt it. Whenever he met people, he would also butt them.

In this case, clauses marked with -sə do restrict the reference of the main verb. However, according to Haspelmath's discussion, this only shows that the clauses in question are not coordinate (or main) clauses. An important question that has not been asked here, and which merits further investigation, is whether cosubordinate clauses can be used restrictively or not. Since according to Haspelmath (1995:25), cosubordination is intermediate between coordination and subordination, it would be likely that cosubordinate clauses may share some features with subordinate clauses, since they are both dependent on the main clause.

For point E, possibility of extraction, Haspelmath (1995:16) shows that subordinate structures do not restrict the possibility of extraction from the superordinate clause while coordinate structures do. Unfortunately, I have no data to support or refute this point.

In summary, the only evidence that might suggest that non-finite clauses in Santa are subordinate is that some forms — -sə, -sənu, and -təla — may be used restrictively in some cases. Otherwise, none of the other points apply to Santa non-finite clauses. According to Haspelmath (1995:26), 'A converb is a verb form that is used primarily in (adverbial) subordinate clauses, and a medial verb is a verb form used primarily in cosubordinate clauses.' Taking our previous discussion into account, I would assert that Santa non-finite verb forms are used primarily in cosubordinate clauses, and the non-finite verb forms under discussion here are thus medial verbs, not converbs. Haspelmath (1995:26) does allow for some overlap between converbs and medial verbs, and this is apparently warranted by the fact that some Santa non-finite verb forms may be used restrictively. But the overall syntactic evidence (or lack thereof) strongly argues against the subordinate interpretation and for the cosubordinate one.

Since the grammatical requirements of clause chaining, as described by Longacre (1985), are fulfilled in Santa, and since the non-finite verb forms in Santa are used primarily in cosubordinate clauses as defined by Haspelmath (1995), I will henceforth consider Santa to be a clause chaining language. The languages of the Mongolic language family have not been previously recognized

as clause chaining languages as such. What previous scholars have called converbs and gerunds in Khalkha and adverbial participles in Santa, I am identifying as medial verbs in Santa. Therefore, it would seem that further syntactic investigation of Mongolic non-finite verb forms would be a fruitful avenue of future research.

8.3.3 Unmarked verbs and clause chains

In order to show how common clause chaining is in Santa, the relative number of sentences that have chaining structures are tabulated in Table 8.46. It shows that 49% of the sentences in my database have clause chaining structures.

	#	%
Non-chaining sentences	155	51
Chaining sentences	150	49
Total	305	100

Table 8.46: Chaining and non-chaining sentences in the database

Up to this point, the fact that medial verbs may be unmarked has not been discussed in detail. This point is particularly important when discussing Santa because Khalkha (Standard Mongolian) and Baonan (a Mongolic language spoken in the Gansu/Qinghai border region in China) do not allow unmarked medial verbs.¹³⁹

An example with unmarked medial verbs is given in (93). Examples of this sort are particularly difficult to translate into idiomatic English. The literal

¹³⁹ I have no information regarding other Mongolic languages regarding this point.

translation is ‘I run escape came.’ In this case, neither the verb xolu ‘to run’ nor the verb anda ‘to escape’ has an overt switch-event marker.¹⁴⁰

(93) “bi xolu-Ø anda-Ø ira-wo.” F08:37

1SGNM run-SN escape-SN come-PRF

“I ran and escaped.” or “I escaped by running.” or “I came by means of escaping by running.”

Example (93) is a good example of a *serial verb construction*. Li & Thompson define this as, ‘a sentence that contains two or more verb phrases or clauses juxtaposed without any marker indicating what the relationship is between them (Li & Thompson 1981:594).’ However, my claim that will be supported later is that the relationship between the juxtaposed verbs can be inferred from the zero-marking. The function of the unmarked medial verbs will be discussed in section 8.3.8.6.¹⁴¹

In order to see how common unmarked medial verbs are in Santa, Table 8.47 subdivides sentences into those that have purely chaining verbs, those that mix chaining and unmarked medial verbs, and those that have purely unmarked medial verbs.

¹⁴⁰ In this example, the lexical meaning of the final verb ira ‘to come’ has been bleached leaving for the most part only the directional sense. This type of serial verb construction is referred to by Givon (1991:83) as *deitic-directional*.

¹⁴¹ Since constructions of this type are not allowed in Khalkha or Baonan, how did they develop in Santa? A tentative hypothesis is that constructions of this type developed through language contact with Hui Chinese, which has serial verb constructions.

	#	%
Sentences with only clause chaining verbs	106	71
Sentences with chaining and unmarked medial verbs	27	18
Sentences with only unmarked medial verbs	17	11
Total	150	100

Table 8.47: Instances of clause chaining and unmarked medial verbs in the database

From Table 8.47 we can see that the use of unmarked medial verbs is a common clause combining strategy in Santa, but not nearly as common as clause chaining. Although one might argue that instances of unmarked medial verbs should be omitted from the discussion of chaining structures, I am going to include them because, as we will see later, a) unmarked verbs form a distinct category along the eventhood-continuity continuum; and b) the function of unmarked medial verbs is analogous to medial verbs with switch-event markers. Therefore I will treat the -Ø marking as meaningful and as an integral part of the switch-event marking paradigm.

8.3.4 What is an event?

According to Hopper and Thompson (1984), 'A discourse event can be seen as an answer to the question 'What happened?' (1984:276).' This definition of an event then limits events to non-stative realis assertions (Payne 1991:249). But as will be seen below, the Santa medial verb suffixes link realis to realis, irrealis to irrealis, irrealis to realis, and realis to irrealis situations. Thus it would seem that this definition of event does not sufficiently describe what the Santa medial verb suffixes are linking.

In Givon's discussion of *topic continuity*, he gives ' . . . four parameters which constitute major threads of the narrative:

- a) Continuity of time
- b) Continuity of place
- c) Continuity of action
- d) Continuity of participants (Givon 1983:192)

These parameters can be used to measure continuity between clauses. Thus in an indirect way, one might be able to delineate events using these parameters.

Results for the first two parameters are as follows. I found no instances of change in time following a medial verb. All 23 instances of change in time in my database occurred after finite verbs. Of the 15 instances of change in place, 11 occurred after finite verbs and 4 after medial verbs: 2 after -sə and 2 after =dənə. This is expected, because -sə and =dənə, as I claim in section 8.3.7, specify the least amount of continuity with the following clause.

The last two parameters will be investigated in greater detail in section 8.3.7 where I discuss each of the switch-event markers in turn. Change in action will be discussed in terms of the temporal/semantic relationship between clauses and change in participant will be discussed in terms of switch-reference.

Therefore what I am considering to be an event consists of an action (realized or unrealized) that cannot occur at different places or times, but can consist of multiple simultaneous sub-actions and can involve multiple participants. This event then is viewed by the narrator as a Gestalt, a unified or integrated whole.

Therefore I want to say that in example (94) below, although as yet unrealized (irrealis), the action of the magpie walking and the others watching him as he walks can be understood as a single Gestalt when the situation is objectively viewed from the outside, and thus as one event.

- (94) *tʉga* *kiəliə+dziwo*,
 chicken say+PROG

“*tʃi* *niə* *jawu-dzi* *bidziən* *niə* *udzə-jə*.” MP:51-3
 2SGNM one walk-SS 1PLEXNM one see-DES
The chicken says, “We will watch a bit while you walk.”

8.3.5 Switch-event versus switch-reference

Longacre (1985) claims that cross-linguistically clause chaining has three distinctive features. In his words:

- (a) There is a clause (characteristically final in a chain of clauses) that has a verb of distinctive structure that occurs but once in the entire chain while other (typically non-final) clauses have verbs of different structure.
- (b) Each non-final clause is marked so as to indicate whether the following clause has same subject or different subject from itself ...
- (c) A further feature of chaining is considerable attention to temporal relations such as chronological overlap (‘while’, ‘at the same time’) versus chronological succession (‘and then’) which shade off into logical relations such as cause and effect, result, and so forth. Temporal relations appear to be central in these languages and are extended metaphorically in other directions (Longacre 1985:264–5).

I have already addressed point (a) in section 8.3.1 above. As we will see in sections 8.3.7 and 8.3.8, point (c) is a central distinction in Santa as well. In this section I would like to address point (b), whether the Santa medial verb suffixes in fact mark switch-reference. Table 8.48 summarizes for each medial verb suffix whether the subject of the following verb is the same or different. Discussion of

-tala, and +sənu have not been included here because of the low number of tokens in this database. However, they will be included in the discussion in section 8.3.9.

Suffix	Same subject		Different subject		Total
-sə	20	26%	58	74%	78
=dənə	41	95%	2	5%	43
-dzi	65	90%	7	10%	72
-lə	12	100%	0	0%	12
-Ø	59	97%	2	3%	61

Table 8.48: Switch-reference statistics for the medial verb suffixes

Although correspondence for same subject is high for the latter four suffixes, the suffix -sə marks different subject only 74% of the time. It would seem then, that if one wants to characterize this whole set as switch-reference markers, one is missing an important distinction, especially for the suffix -sə. I propose that these are not switch-reference markers at all, but rather *switch-event* markers, and that their tendency to indicate switch-reference is only a by-product of their two primary functions which are to mark switch-event and semantic/temporal relations.

Mithun (1993) found a similar situation in Central Pomo, a Pomoan language of Northern California. In Central Pomo, there is a set of six morphemes that seem to serve as switch-reference markers, but as Mithun points out, 'Their primary function is to specify relations between actions, states, or events, not participants. They mark same versus different eventhood, rather than same versus different subject (Mithun 1993).' This conclusion is in accord with my findings, in that the function of the medial verb suffixes in Santa is not to mark switch-reference but to mark switch-event.

Another study that supports these findings is Bakker (1993) in which he describes *event continuity* in Ancient Greek. He defines event continuity as, 'the degree of discreteness of events in a story and the relative distance (continuity) between them, temporally, spatially or conceptually (Bakker 1993).'

As we will see, this is exactly the function of the switch-event markers in Santa, to specify the continuity of events.

8.3.6 Methodology for this study

8.3.6.1 The database

The database for this project consists of seven Santa folktales: MP, F05, F06, F07, F08, F11 and F13. One of the folktales included in this database, MP, I tape-recorded in the city of Linxia, Gansu Province, in the People's Republic of China during the summer of 1990. The other folktales were published in Bu He (1987), *Dongxiangyu huayu cailiao* [Dongxiang discourse material], henceforth DHC. (See Chapter 2 for more information on these folktales.)

An issue that needs to be addressed is whether the six published texts vary in any way from the oral one included in the database. Since Santa has no accepted written form and thus no literary tradition, differences between literary style (in the published texts) and oral style (in the spoken text) should be minimal. Granted, the published texts are more planned than spoken ones, but the oral folktale included in the present database was pre-planned (but not written) by its narrator before it was tape-recorded. Therefore, I believe significant differences between literary and oral style in the database will be limited.

Another relevant issue is whether the speaker style of a particular author/narrator might skew the data. In order to minimize this effect, I have chosen folktales with six different author/narrators.

8.3.6.2 What is a sentence?

It is possible for a sentence in Santa to contain any number of clauses. Since the sentence in Santa may contain no more than one finite verb and any other verbs in the sentence must be non-finite and marked with one of the seven

switch-event markers previously mentioned, I have chosen the sentence as my basic unit of analysis.¹⁴²

Each of the texts has been subdivided into sentences. A sentence boundary has been marked after each final verb.¹⁴³ This methodology would imply that each sentence has at least one final verb.

This, in fact, cannot be maintained rigorously. The exceptions are as follows:

a) There are 2 sentences of quoted Chinese Hui speech in F11. These sentences and their verbs are excluded from all statistical counts.

b) There are 9 sentences that contain a single non-finite medial verb but no final verb. In each instance, the verb is the verb of saying giəsə which follows quoted speech.¹⁴⁴

These sentences are all one-word sentences. This verb is composed of the verb stem giə 'to say' and the switch-event marker -sə. giəsə is consistently set apart by the editors of the DHC from quoted speech by punctuation and is always followed by a comma or in one instance by no punctuation at all. A quick glance at other folktales in the DHC yields numerous examples of this sort where there is no punctuation following the quotative verb giəsə, and it is only in instances of the verb giəsə that they sometimes choose not to use punctuation. The manner in which the editors of the DHC chose to punctuate (or not punctuate) these

¹⁴² It should be understood that the sentence in Santa is not necessarily equivalent to the sentence in English. Longacre (1985) makes a similar point about the non-equivalence of the sentence in clause chaining languages compared to the English sentence. The Santa sentence may more closely approximate the English paragraph. For an example of this, see example QQ below in section 8.3.8.3.

¹⁴³ Occasionally there are sentence-final particles that follow the verb. Whenever this is the case, the sentence boundary follows the particle.

¹⁴⁴ Charles N. Li (personal communication) suggests that giəsə may have been grammaticized as a quotative marker and thus is no longer a verb. However, I have included giəsə in my statistical counts.

particular examples suggests that they consider them to be non-final, in other words, where a reply or response by word or action is expected to follow. This phenomenon is clearer when one realizes that the quoted speech complement associated with 7 of the 9 instances of *giəsə* are questions which are answered in the immediately following context. For these reasons I have considered them to be non-final. I have also decided to set them apart so that they are considered sentences by themselves, even though they are non-final.

8.3.7 The Hypothesis

I will argue that the Santa switch-event markers have two primary functions:

A. to specify whether the eventhood of the marked verb and following verb is same or different

B. to specify the semantic/temporal relationship of the marked verb to the following verb

Corollary: the extent to which the switch-event markers indicate switch-reference (whether the subject of the following verb is the same or different) is purely a consequence of the aforementioned primary functions

Table 8.49 lists each of the primary non-finite verbal markers (including zero-marking), and summarizes a) its semantic/temporal function, b) whether it marks the following event as same or different, and c) whether the following subject *tends* to be same or different. Each of the non-finite verbal markers will be discussed in more detail in section 8.3.8.

Suffix	S/T Function	Eventhood	Subject
-sə	Loose temporal	Different	Different
=dənə	Sequential		Same
-dzi	Simultaneous		
-lə	Purposive		
-Ø	Integrative		

Table 8.49: The Santa non-finite verbal markers

In (95), the non-finite verbal markers are distributed across a continuum so that those markers further to the left specify a greater degree of continuity with the following verb and the markers further to the right specify a lesser degree of continuity with the following verb. Support for the eventhood-continuity continuum will be presented below as I discuss each marker.

(95) The Eventhood-Continuity Continuum:

<u>Most Continuity</u>			<u>Least Continuity</u>	
-lə	-Ø	-dzi	=dənə	-sə

8.3.8 Discussion of the primary switch-event markers

In this section I will discuss each of the switch-event markers. Although the switch-event markers +sənu, and -talə occur infrequently or are not at all in the database used for this switch-event marker study, these markers will be discussed in section 8.3.9 employing other data.

Distribution of the switch-event markers in the current database is summarized in Table 8.50. Of the primary switch-event markers, -sə was the most common at 29%, followed closely by -dzi at 27% and -Ø at 23%. =dənə came next at 16% and then -lə at only 4%.¹⁴⁵

¹⁴⁵ There were 3 instances of +sənu, accounting for 1% of the switch-event markers in my database for this study.

Switch-Event Marker	#	%
-sə	78	29
-dzi	72	27
-Ø	61	23
=dənə	43	16
-lə	12	4
Total non-finite verbs	269	100

Table 8.50: Distribution of switch-event markers

8.3.8.1 Prototypical vs. non-prototypical uses of switch-event markers

In my analysis of the different functions of the switch-event markers, I have concentrated on the prototypical uses of each marker. One can find instances of each switch-event marker that are more peripheral to the prototypical uses described here. But my goal here is not to explain every use of a given marker, but rather to show the prototypical uses of each marker.

Another factor that may influence the choice of a marker in a given situation is the perspective which the author wishes to convey. Since the use of any particular switch-event marker, other than *-lə*, is not syntactically constrained to any great degree, the author/narrator has some freedom in his choice of markers. Taking this factor into account may explain some of the less prototypical uses of a given marker.

8.3.8.2 *-sə* Different event/Loose temporal (DL)

There are 78 instances of the switch-event marker *-sə* as shown in Table 8.50. Out of 269 instances of non-finite verbs, it occurs 29% of the time.

The primary function of *-sə* is to specify 1) that the verb marked by *-sə* and the following verb are *different* events; and 2) that there is *loose* temporal/semantic relationship between these two events.

The relationship of the clause which is marked by -sə with the following clause is determined by context, but this relationship generally falls in one of the following categories, shown in Table 8.51.

	#	%
Causal	32	41
(<u>ingiəsə</u> / <u>tɕingiəsə</u>)	14	18
Conditional	14	18
Quotative	10	13
Different simultaneous events	5	6
Counter-expectation	3	4
Total	78	100

Table 8.51: The uses of -sə

These uses are listed from most to least common. It is also true that as one goes down the list, the usage becomes less prototypical and more peripheral. In my opinion, the prototypical temporal/semantic relationship is one of *implication*. However, there are many cases where the implicational relationship of the -sə clause with the following clause is very weak or non-existent. Therefore, it seems that the best approach is to describe this relationship as loosely temporal.

8.3.8.2.1 Causal

46 of the 78 instances of -sə I considered to be causal. But of these 46 instances, 13 involved the verb ingiəsə ‘in this way do-DI’ and 1 involved the verb tɕingiəsə ‘in that way do-DI’. I will treat these 14 instances separately in section 8.3.8.2.1.1. The remaining 32 causal instances of -sə will be discussed here. What I mean by causal is that the situation that is marked by the -sə clause implies a situation that has come about due to the state of affairs of the clause marked by -sə. This usage is illustrated in example (96) below.

(96) hə tɕiantɕiəlu-dzi ingiə=dənə dzəŋgəi-ni boko dziərə
 3SGNM grope-SS this.way.do=DQ wolf-GN hindquarters on

niə matɕi-sə ɔndzəxə wo
 one brush.past-DL donkey COP.S

giə-dzi 'ba-dzi unu-wo.
 do-SS ONOM-DE ride-PRF

'ba-dzi unu-sə dzəŋgəi bæliə-Ø xolu-wo. F11:18-20
 ONOM-DE ride-DL wolf carry.on.back-SN run-PRF

He was groping in this way, and because he brushed past the wolf's hindquarters (he thought) this is the donkey. He quickly climbed on to ride it. Since he quickly climbed on to ride him, the wolf ran off carrying him on his back.

Both events contained in the clauses marked with -sə are in a causal relationship with the events in the respective following clauses. Conversely, it can be understood that the action of the following clause is a result of the action in the -sə marked clause.

Another example is given below.

(97) niə jawu-sə hə godzia-nə-ni jawu-dəŋ-ni marta+dziwo. MP:56-9
 one walk-DL 3SGNM self-RP-GN walk-style-AC forget+PROG

He started to walk, and as a result he forgot his own walking style.

In this example, the action contained in the clause marked by -sə, his starting to walk, is in a causal relationship with the action in the following clause where he forgets his own walking style.

8.3.8.2.1.1 ingiəsə and tɕingiəsə

The verbs ingiə and tɕingiə are literally translated 'in this way do' and 'in that way do' respectively, but forms marked with -sə function differently than

other verbs marked with -sə. There are two ways in which they are different: a) these forms generally do not have an overt subject; and b) they are almost always sentence-initial.¹⁴⁶ Their function, therefore, seems to be for sentence-linking rather than clause-linking.¹⁴⁷ When they occur sentence-initially, they mean ‘and so’ or ‘and then’. However, some of their causal function has been retained. The situation or state of affairs in the discourse that immediately precedes inqiəsə/tɕinqiəsə *brings about* or *results in* the situation or state of affairs that follows inqiəsə/tɕinqiəsə. Example (98) illustrates this use of inqiəsə.

(98) kuŋ-la-ni ʃida ətʃi-sə ʃidzə=nə,
 person-PL-AC close.to go-DL feel.shame=IMP

jə qji=nə.
 also afraid=IMP

in-qia-sə kuŋ-la tərə-ni dʒiu udzə dɑ=nə. F13:07-9
 this.way-do-DL person-PL 3SG-AC then look unable=IMP

Whenever he would go near people he would feel shame and also he would be afraid. And so [inqiəsə] people could not bear to look at him.

Notice in (98) above that inqiəsə has no subject, but it links the discourse back to the previous sentence with the result that follows.

Another usage of inqiəsə is given in example (99).

¹⁴⁶ An exception to this is found in example QQ below which has an overt subject and is not sentence-initial.

¹⁴⁷ One possible interpretation of these forms is that they are sentential adverbials (Carol Genetti, personal communication).

- (99) sauxu-ni dzəŋgəi idziə-Ø agi-wo.
goat-AC wolf eat-SN take-PRF

¶ in-qia-sə ənə dzəŋgəi pəsə qudza-ni otʃira-wo. F06:52-3
this.way-do-DL this wolf again sheep-AC meet-PRF
The wolf ate the goat.
And then [inqiəsə] the wolf met the sheep.

In this folktale, a goat and a sheep are trying to stay out of the wolf's path. The goat is unsuccessful and gets eaten. In this particular example, the state of affairs that follows inqiəsə seems to follow only temporally rather than implicationally. In other words, just because the wolf has eaten the goat, there is no explicit reason why the wolf should meet the sheep next. But, because of what we know about the storyline and how stories generally progress, we *expect* that the next state of affairs will involve the wolf meeting the sheep. Thus, the implicational sense of -sə in this usage of inqiəsə is very weak or non-existent, leaving only the loose temporal sense.

Another example of inqiəsə and the only example of təinqiəsə in this database are given in (100).

- (100) ¶ in-qia-sə 'basi ʃidzi-də kiəliə+dziwo:
this.way-do-DL tiger lion-DT say+PROG

“təin-qia-sə gəji dziaʊ! tʃi ənə doro
that.way-do-DL elder.brother younger.brother 2SGNM this place

mi-ni niə səkɪ-Ø!” F07:20-1

1SG-AC one wait-IMPR

And so [inqiəsə] the tiger said to the lion, “So [təinqiəsə] friend! You wait for me in this place for a little while!”

The first use of ingiəsə links this sentence to the previous discourse where the lion has claimed that it is man's wisdom that is the greatest. The tiger disagrees and decides to respond, based on that claim. The use of tɕingiəsə occurs within the tiger's quoted speech. The tiger has arrived at a decision based on the previous discourse and his speech to the lion is introduced with tɕingiəsə.

Because the use of ingiəsə/tɕingiəsə is syntactically limited, and because the implicational nature has been significantly bleached, these forms are most likely grammaticized and one might want to exclude these from any statistical counts. However I suggest that their function is basically the same, but on a higher level as sentence linkers. Table 8.52 gives the switch-reference results for verbs with -sə, excluding ingiəsə/tɕingiəsə. Comparing Table 8.52 with Table 8.48 above, the correspondence for different subject without ingiəsə/tɕingiəsə is 72% and with ingiəsə/tɕingiəsə is 74%.

Same subject		Different subject		Total
18	28%	46	72%	64

Table 8.52: Switch-reference results for -sə without ingiəsə/tɕingiəsə

8.3.8.2.2 *Conditional*

14 of the 78 instances of -sə I identified as conditional. These constructions vary semantically from the rest in that the modality of conditional constructions is always *irrealis*. In the following example, it is difficult to determine whether this construction should be interpreted as an *irrealis* causal or a conditional.

(101) ¶ atɕiə-də niə kuŋ-də ɕuar or qu-dzi ire+dziwo.
 long.ago-LC one person-LC two horn come.out-SS come+PROG

ənə kuŋ jawu-dzi wəidziən-də ətsi-sə jə muku=nə.
 this person walk-SS door-LC go-DL also butt=IMP

kuŋ-ni ətsi-sə jə muku=nə. F13:01-3
 person-AC go-DL also butt=IMP

Long ago, there was a man with horns growing out of his head. Whenever this man went to a door, he would butt it. Whenever he met people, he would also butt them.

One could interpret this example to mean that either his encountering doors and people makes him butt them (the causal interpretation) or that whenever this condition is fulfilled, he butts them (the conditional interpretation).

This imprecise boundary between the irrealis causal and conditional interpretation may have led to a semantic extension of the causal use of *-sə* into the conditional use. In other words, the conditional use might have developed historically from the causal use.

There are a number of examples in the database that are clearly conditional and not causal. Two of these are given in (102) and (103).

(102) “dzaŋɕəi iɾə-sə tʃi iŋ-ɕiə-sə kiəliə-Ø, ...” F06:10
 wolf come-DL 2SGNM this.way-do-DL speak-IMPR
“If the wolf comes, you in this way speak to him, ...”

(103) “bi tʃi-ni bəri-sə dziəku niə sa-ji-dzi
 1SGNM 2SG-AC take-DL rope one make.rope-BVS-SS

dziəudziliə=dənə idziə=nə.” F06:66

hang.up=DQ eat=IMP

“If I catch you, I will make a rope and hang you up, then I will eat you.”

In both of these examples the -sə clause is unambiguously conditional and not causal. In (102) if the wolf comes, dzaŋGəi irəsə, the goat then should say what the sheep is advising. In example (103), the sheep is telling the wolf if he (the sheep) catches him (the wolf), he (the sheep) will tie him up with a rope and eat him.

8.3.8.2.3 Quotative

10 of the 78 uses of -sə were used with quoted speech. 7 of the 10 instances of the quotative usage were question/answer pairs. All of these instances involve the verb giəsə. In each case, the verb giəsə follows a quoted question and a response to the question immediately follows. An example of this is given below.

- (104) “tʃi-ni xuru xuru hə ʃi jaŋ wo?” giə-sə,
2SG-GN ONOM ONOM that COP.H what COP.S say-DL

‘hə ʃi mi-ni qawa wo.
that COP.H 1SG-GN nose COP.S

bi tʃi-ni fumitʃiə-dʒi idʒiə=nə.” F06:18-21
1SGNM 2SG-AC smell-SS eat=IMP

“*What is that “xuru xuru” of yours?*” he said.

‘That is my nose, so I can smell you while I’m eating you.’”

3 of the 10 instances of the quotative usage were reported speech. An instance of direct reported speech is shown in (105).

- (105) “xai! gaji dʒiau! tʃi kiəliə-sə kuŋ-ni niə
hey elder.brother younger.brother 2SGNM say-DL person-AS one

gau ‘agili wo giə=nə,” F07:48-9
good wisdom have say=IMP

“Hey! Friend! You said this person had good wisdom.”

Two instances of reported thought are given in (106).

- (106) dzəŋgəi sumu-la-sə ənə “go ləuləu” mi-ni unu-wo.
 wolf think-BVS-DL this pot leak 1SG-AC ride-PRF

guxi sumu-la-sə bi ənə “go ləuləu-ni” unu+dziwo. F11:21-2
 thief think-BVS-DL 1SGNM this pot leak-AC ride+PROG

The wolf thought this “leaky pot” is riding me. The thief thought I am riding the “leaky pot”.

This use of -sə differs from direct quotation in that a finite verb usually always precedes a direct quote. The use of -sə seems to imply a greater distancing from what is said or thought than when the speech is directly quoted.

Syntactically, the question/answer use of -sə differs from the reported speech use in that it falls between the question and the answer while the reported speech use always precedes the reported speech.

8.3.8.2.4 Different simultaneous events

5 of the 78 instances of -sə were different simultaneous events. This use of -sə is less prototypical. An example of this usage is given in (107).

- (107) ¶ atɕia-də niə 'basi wo,
 long.ago-LC one tiger EXST

ənə giəru-dzi irə-sə niə tauləi xolu-dzi giəru-dzi irə-wo.
 his cross-SS come-DL one rabbit run-SS cross-SS come-PRF

tauləi xolu-Ø giəru-dzi irə-sə ja ənə 'basi bari=dənə agi-wo. F08:1-3
 rabbit run-SN cross-SS come-DL PRT this tiger catch=DQ take-PRF

Long ago there was a tiger. As he was crossing, a rabbit came running across. As the rabbit came running across, the tiger caught him and took him.

The relationship of the -sə clauses and the following clauses is loosely temporal. The -sə marked clauses occur simultaneously or overlap with the following clauses. The main point though is that they are construed as different events by the narrator. The relationship of the -sə marked clause to the following clause is easily interpreted from context.

8.3.8.2.5 Counter-expectation

There are 3 instances of what I call counter-expectation out of 78 instances of -sə. This use of -sə seems to specify that the result of the following clause runs counter to the original expectation as in (108).

- (108) dʒiauli-Ø bau-Ø ətsi-sə ənə qala-du 'basi wo. F08:53
 jump-SN down-SN go-DL this where-P.AS tiger COP.S
He jumped down where (he thought) the tiger was.

In this part of the story, the tiger has seen his reflection in a well and he thinks it is another tiger. So he jumps into the well expecting the other tiger to be there. The end result is that the other tiger is not there after all and the tiger drowns.

The second example is given in (109).

- (109) irə-Ø saxi-sə ənə tauləi əsə irə-wo. F08:26
 come-SN wait-DL this rabbit R.NEG come-PRF
[The tiger] came and waited, but the rabbit did not come.

We know from the story that the tiger came specifically to wait for the rabbit who had promised to meet him there, but the end result is that the rabbit does not come.

The last example is given in (110).

(110) “bi ənə 'aɣili udzə-lə irə-sə
 1SGNM this wisdom see-SP come-DL

ənə mɑ-də 'aɣili-nə əsə udzə-ɣɑ-wo.” F07:50
 this 1SG-DT wisdom-RP R.NEG see-CS-PRF

“I came in order to see his wisdom, but he did not show it to me.”

The tiger in this story went to see man’s great wisdom, but the end result from the tiger’s perspective is that he does not see it.

The counter-expectation use of -sə is similar to the different simultaneous events usage, except that the outcome of the event following the -sə clause is negative or unexpected.

8.3.8.2.6 Summary

We have seen that the -sə marked clause and the following clause always constitute different events and that the most prototypical temporal/semantic relationship between them is one of implication. However, other uses such as different simultaneous events and counter-expectation are also possible. I assume that the uses of -sə are not limited to those uses I have described in this section. In fact, some of my interpretations are arguable because the boundaries between different uses are unclear. The main point that I wish to express is that the clause following the -sə marked clause always constitutes a different event. The temporal/semantic relationship is a loose temporal one. The specific relationship of the two clauses, however, may be determined from the context.

One aspect, not noted above about -sə clauses, is that -sə is rarely used more than once in a sentence. A rare instance is given below where there are two -sə clauses. Notice, in this example, that neither -sə clause restricts the referent or action of the main clause.

(111) qui irə ixəu, mori niə aji-sə niə tsa-ji-sə
 come.out come after horse one frightened-DL one surprised-BVS-DL

niə dzulu xolu-wo. BH:18-21

one short.while run-PRF

After [the dog] came out, the horse was a little frightened and a little surprised, and ran for a short while.

The limitation on more than one -sə clause occurring in a sentence may be related to the fact that -sə clauses may be used to restrict the action of the final verb. (See section 8.3.2 above.) This evidence suggests that -sə clauses (including ingiasə and tɕingiasə) may be best understood as adverbial clauses, but without further syntactic evidence to support this claim, I am going to continue to consider -sə clauses to be clause chaining forms, although they are not prototypical.

With respect to the eventhood-continuity continuum, different events do not have a high degree of continuity. There is always a change in action from the -sə clause to the following one, even though they may be implicationally related. Participants are more likely to change than not from one event to the next. This is reflected in the fact that 74% of the clauses that follow -sə clauses have different subjects. (If ingiasə/tɕingiasə are excluded the percentage is 72%). Thus, overall, clauses that follow -sə have a very low degree of continuity.

8.3.8.3 =dənə ~ =də Different event/Sequential (DQ)

There are 43 instances of the switch-event marker =dənə in the database. Out of 269 instances of non-finite verbs, it occurs 16% of the time.

The primary function of =dənə is to specify 1) that the verb marked by =dənə and the following verb are *different* events; and 2) that there is a temporal/semantic relationship of *sequentiality* between these two events. This is to say that the action expressed by the verb that follows the one marked by =dənə is a different event, but that this event closely follows the preceding one. Unlike the switch-event marker -sə discussed above, there is not necessarily an

implicational relationship between the first and second event. A wonderful example of the use of =dənə is found in example (112) which altogether contains 11 verbs, the longest sentence in the database.

(112) fuja-Ø gaŋgana-ka=dənə ənə kuŋ qari-dzi giə-də-nə irə=dənə
 tie-SN stretch-CS=DQ this person return-SS house-LC-RP come=DQ

niəndə otʃi-dzi idziə-dzi qau-da=dənə qudoxo-nə uxu-dzi ətsi=dənə
 quickly drink-SS eat-SS good-VS=DQ knife-RP take-SS go=DQ

ənə 'basi-ni arasuŋ-ni amitu tsoji=dənə aŋi-wo. F07:41

this tiger-GN skin-AC alive peel.off=DQ take-PRF

After stretching (the rope) and tying (him to the tree) [=dənə], the man returned to his home [=dənə], quickly ate and drank until he was full [=dənə], took his knife with him [=dənə], and peeled off the tiger's skin while he was still alive [=dənə]; then he took the skin (and left).

The placement of the switch-event marker =dənə in the free translation above highlights its different event/sequential action nature. The two verbs fuja 'to tie' and gaŋgana 'to stretch' constitute a single gestalt event of 'stretching and tying the rope to the tree'. Zero-marking on the first verb indicates the following verb is part of the same event (see section 8.3.8.6). The second verb, gaŋgana 'to stretch', is marked by =dənə indicating what follows is a different event. This event of stretching and tying takes place at the tree.

The next event of 'returning home' consists of two directional motion verbs qari 'to return' and ire 'to come', the first being marked by -dzi indicating that the verb so marked and the following verb constitute a single event (see section 8.3.8.4). The second verb is marked by =dənə indicating that what follows is still another event. This event of returning home is transitional from the tree to the person's home.

The next event of 'eating and drinking until he was full' consists of three verbs. The first two, otʃi 'to drink' and idziə 'to eat' are both marked by -dzi

indicating that this is a single event along with the following verb gauda 'to become full'. The verb gauda 'to become full' is marked by =dənə indicating that what follows is yet another event. This event takes place at the person's home.

The next event of 'taking his knife' consists of two verbs uku 'to take' and ətsi 'to go'. The first verb is marked by -dzi and the second by =dənə indicating another event still yet to follow. This event is transitional between the person's home and the tree.

The event of 'peeling off the tiger's skin while he is still alive' consists of only one verb tsoji 'to peel' which is marked by =dənə indicating that there is yet another event to follow. This event takes place at the tree.

The final event of 'taking it away' consists of the finite form of the verb qgiwo 'to take (away)' in the perfective aspect. Altogether there are 11 verbs used to express this string of 6 events all carried out by the same subject.

Of the 43 instances of =dənə in the database, 41 of these or 95% have the same subject as the following verb. There were 2 examples where the subject of the following verb was not clearly the same as the subject of the verb marked by =dənə. The first of these is given below.

(113) “bu pa dzai bu pa laŋ a, F11:9
not afraid thief not afraid wolf PRT

dzi pa wo-dzi ‘go ləuləu.’ ” F11:10
only afraid 1SG-GN pot leak

¶ guxi dzəŋgəi gala sonosu-wo. F11:11
thief wolf two hear-PRF

ənə dzəŋgəi-sə uliə aji-Ø guxi-sə uliə aji=dənə
this wolf-AB I.NEG afraid-SN thief-AB I.NEG afraid=DQ

“go ləuləu” si jaŋ odziən wo ʂa? F11:12
pot leak COP.H what thing COP.S PRT

“I’m not afraid of the thief, I’m not afraid of the wolf, I’m only afraid of my ‘leaky pot.’ ”

The thief and the wolf both heard this. (She’s) not afraid of the wolf and not afraid of the thief, but what is this “leaky pot”?

As mentioned earlier, the first two sentences, F11:9 and F11:10 are not Santa, but Chinese Hui. In the story, this couplet is spoken by an old woman who is trying to protect her donkey from a thief and a wolf. In F11:12, the understood subject of the first verb aji ‘to be afraid’ is the old woman. The subject of the second aji is also the old woman, but the subject of the following verb which is the Chinese copula si is go ləuləu ‘leaky pot’. But this does not matter if one accepts the hypothesis that the primary function of =dənə is to link different sequential events that are not implicationally related. So in this example, this sequentiality is not so much temporal as it is a linear thought progression that parallels the old woman’s speech. In this way one can understand the event following the verb marked by =dənə is in sequential relationship with the preceding clause.

The other example of a verb marked by =dənə where the following subject is different is given below.

(114) “ədə tʃi ətʃi-Ø!
now 2SGNM go-IMPR

ətsi=dənə məxəʃidziə-ku jan ənə ciəndzi-də bi tʃi-ni jan
go=DQ tomorrow-I.NM still this time-LC 1SGNM 2SG-AC still

ənə oroŋ-də saxi-jə ja!
this place-LC wait-DES PRT

tʃi irə-Ø!” F08:22-4
2SGNM come-IMPR

“Now you go! After you go, tomorrow I will wait for you at this same place and time. Then you come!”

The rabbit is the subject of the verb ətsidənə ‘to go’, even though it is not overtly mentioned. The temporal distance between these two events is greater than those previously exemplified. But =dənə is used, in my opinion, to mainly express the sequentiality of these two events. See discussion of +sənu in section 8.3.9.1.

8.3.8.3.1 One of the functions of finite verbs

We have looked at the two switch-event markers -sə and =dənə that specify that the following event is different. We have seen that when -sə is used, there is usually an implicational relationship between the event expressed by the verb marked with -sə and the following event. Usually, the subject of the following clause is different as well. We have also seen that when =dənə is used, the following event is temporally related by sequentiality. How then, are different events encoded that have different subjects if there is no implicational relationship? It seems that this function is fulfilled by the use of finite verbs. In other words, when the following event is different and non-implicational, and the

subject is different as well, then a finite verb is used to terminate the first event and a new sentence is used with an overt different subject. This can be seen in the example below.

(115) pəsə bai-sə ənə tauləi niədzaŋ irə-wo.
 still stay-DL this rabbit alone come-PRF

¶ 'basi asa-wo: F08:28-9

tiger ask-PRF

(The tiger) was still waiting when the rabbit came alone.

The tiger asked, . . .

In this example, the rabbit coming and the tiger asking are different events with different subjects. Since there is no strong implicational relationship here, the verb irə 'to come' is finite and a new sentence follows with the tiger as its subject.

In the database, there are 294 finite verbs. 7 occur at the end of the story so there is no following subject, leaving a total of 287. Of these, 198 or 69% have different subjects following while 31% have same subjects.

8.3.8.3.2 Summary

We have seen that the =dənə clause and the following clause always constitute different events and that the most prototypical temporal/semantic relationship is one of sequentiality.

With respect to the eventhood-continuity continuum, different events do not have a high degree of continuity. There is always a change of event from the =dənə clause to the following one. With respect to change of participants, 95% of the clauses that follow =dənə have the same subject. Thus, clauses that follow =dənə have a higher degree of continuity than clauses that follow -sə since -sə clauses are usually followed by clauses with different subjects. Overall, clauses that follow =dənə have a somewhat low degree of continuity.

8.3.8.4 -dzi Same event/Simultaneous (SS)

There are 72 instances of the switch-event marker -dzi in the database. Out of 269 instances of non-finite verbs, it occurs 27% of the time.

The primary function of -dzi is to specify 1) that the verb marked by -dzi and the following verb are the *same* event; and 2) that there is a temporal/semantic relationship of *simultaneity*. In other words, the action of the verb marked by -dzi and the action of the following verb occur simultaneously, or are at least partially overlap. An example of the use of -dzi is given in (116).

- (116) ənə guala jawu-dzi ula-də qu-dzi ətʃi=nə. F07:3
this two walk-SS mountain-LC go.up-SS go=IMP
These two would walk up the mountain.

The act ‘to walk up’ or ‘to go up the mountain’ is a single gestalt event. But three verbs are utilized to encode this event: the medial verb jawu ‘to walk’ denotes the manner in which they were going (as opposed to running, for instance); the medial verb qu ‘to go up’ denotes their directionality (as opposed to going down the mountain); and the final finite verb ətʃinə ‘go’ which is in the imperfective aspect. Although the verb ətʃinə ‘go’ carries the least specific information, it tells us this event is about ‘going’ and contains the directional sense of movement away from some point. It would be incorrect, in my opinion, to interpret this particular example as composed of three discrete actions that comprise one event. Rather, it should be interpreted as three different perspectives or components of a single gestalt event. And the relationship of these components is one of *simultaneity*.

There is also a high degree of *semantic integration* in this case. But a high degree of semantic integration is not always found when -dzi is used. Example (117) illustrates this.

(117) ənə kuŋ dʒiən-nə musi-dzi bosi-dzi irə=dənə
 this person clothes-RP put.on-SS get.up-SS come=DQ

'basi-də kiəliə+dziwo, ... F07:35

tiger-DT say+PROG

This person got up while putting on his clothes and then says to the tiger, ...

In this example, musi 'to put on' and bosi 'to get up' are less semantically integrated. In other words, the 'putting on' and 'getting up' can be interpreted as separate actions that are construed as a unified event. In this case, their temporal relationship may not be strictly simultaneous, but partially overlapping.

On the other hand, bosi 'to get up' and irə 'to come' are more semantically integrated. The meaning of the verb irə 'to come' in this particular example is probably bleached to some degree and is semantically integrated with 'getting up'. I would argue that there is no sense of movement towards the tiger, but the movement or directionality is part of the 'getting up'. This interpretation is supported by the Chinese gloss which does not translate any movement towards the tiger.

This example contains three verbs linked by -dzi. musi 'to put on' and bosi 'to get up' are linked, and bosi and irə 'to come' are also linked. When three verbs are linked in this manner by -dzi, together they constitute a single event, not two events that overlap. The switch-event marker =dənə, used on the verb irə 'to come' in this example, shows that the verb following the =dənə marked clause will constitute a different event that is sequentially linked to the preceding one (see section 8.3.8.3 above). Since we already know from this discussion that dʒiənnə musidzi bosidzi irə- constitutes a single event, then the result is that the scope of =dənə covers this whole event and sequentially links it to the following one, which in this case is the action expressed by the single verb kiəliə 'to say' or 'to speak'. See example (112) above in section 8.3.8.3 for a similar case.

65 out of 72 verbs marked by -dzi or 90% have the same subject as the following verb. This fact does not mean that -dzi is a same subject marker, even though this is a strong tendency. This syntactic tendency is only a by-product of the semantic or real-world tendency that any given event usually has only one instigator who carries out a particular action, not multiple instigators carrying out multiple actions. However, example (94), repeated as (118) below, is a good illustration of a singular event with multiple participants and actions.

(118) *tugə* *kiəliə+dziwo*,
 chicken say+PROG

“*tʃi* *niə* *jəwu-dzi* *bidziən* *niə* *udzə-jə*.” MP:51-3
 2SGNM one walk-SS 1PLEXNM one see-DES
The chicken said, “We will watch a bit while you walk.”

Although the subject of the verb *jəwu* ‘to walk’ is *tʃi* ‘you’ and the subject of the verb *udzə* ‘to see’ is *bidziən* ‘we (exclusive)’, the situation can be construed as one simultaneous gestalt event: the magpie will walk as the others look on. The crucial factor here is whether the following verb is to be construed as part of the same event, not whether it has the same subject or not.

8.3.8.4.1 *Summary*

We have seen that the -dzi clause and the following clause constitute a single gestalt event and that the prototypical temporal/semantic relationship is one of simultaneity. Less prototypical uses may arise from the narrator’s extension of the prototypical usage.

With respect to the eventhood-continuity continuum, a single gestalt event comprised of simultaneous actions which are semantically integrated to varying degrees can be understood as having a fairly high degree of continuity. As for change in participants, 90% of the clauses that follow have the same subject. Different subjects occur only 10% of the time. Therefore, clauses that follow -dzi

have a higher degree of continuity than clauses that follow =dənə and -sə. Overall, clauses that follow -dzi have a fairly high degree of continuity.

8.3.8.5 -lə Same event/Purposive (SP)

There are 12 instances of suffix -lə in the database. Out of 269 instances of non-finite verbs, -lə occurs 4% of the time.

The primary function of -lə is to specify 1) that the verb marked by -lə and the following verb are the *same* event; and 2) that there is a temporal/semantic relationship of *purpose* between the two verbs. This purposive relationship manifests itself in two syntactically different subtypes: *irrealis* and *realis*.

8.3.8.5.1 *Irrealis purposive*

10 of the 12 instances of -lə are irrealis purposive.

The irrealis purposive use of -lə is best described as ‘for the purpose of’ or ‘in order to’ relationship between the final verb and the medial verb. For example, in English ‘He will go to swim’ can be understood as someone going for the purpose of swimming or in order to swim. Example (119) illustrates the irrealis purposive use of -lə.

(119) ənə dzəŋgəi əndzəkə-ni idziə-lə ətʃi-wo,
 this wolf donkey-AC eat-SP go-PRF

guxi əndzəkə-ni gula-lə ətʃi-wo. F11:14-5
 thief donkey-AC steal-SP go-PRF

The wolf went in order to eat the donkey, the thief went in order to steal the donkey.

This use is irrealis because the outcome of the purpose is not known at this point.

Syntactically, the -lə construction is quite restricted. A medial verb marked by -lə must be immediately followed by another verb.¹⁴⁸ There is a semantic restriction on the verb that follows as well; it must be a *directional* verb. A complete list of the directional verbs used in the irrealis purposive chains in my database include: irə ‘to come’, ətʃi ‘to go’, yawu ‘to walk, to go’, and quuri ‘to go up’. The medial verb marked by -lə is the action which the subject hopes to or expects to carry out.

The medial verb marked by -lə and the following verb can be understood as a single event, although as yet, unrealized. This is because it is the purpose or intention that is important here, not the the actual goal of the -lə marked verb. The actual goal may never be attained. This is illustrated in example (120) where the action of the verb udzə ‘see’ is not realized from the speaker’s perspective.

- (120) “bi ənə ‘aḡili udzə-lə irə-sə
 1SGNM this wisdom see-SP come-DL
- ənə mɑ-də ‘aḡili-nə əsə udzə-ka-wo.” F07:50
 this 1SG-DT wisdom-RP R.NEG see-CS-PRF
- “I came in order to see his wisdom, but he did not show it to me.”*

This is why the irrealis purposive construction should not be construed as a sequence of separate events but a single one. Due to the syntactic and semantic restrictions on this construction and its single eventive nature, it is not surprising that both verbs in this construction always share the same subject.

8.3.8.5.2 *Realis purposive*

2 of the 12 instances of -lə are realis purposive. The realis purposive use of -lə is best described as a ‘to start to’ or ‘to begin to’ relationship between the final verb and the medial verb; such as in English ‘to start to drive’. The inherent

¹⁴⁸ Investigation of a larger body of data reveals that the borrowed Chinese adverb jə ‘also’ may intervene.

inchoativity in the realis purposive is probably an artifact of the realis nature of this construction, in that as the goal of the purposive is realized, the action begins. Example (121) illustrates the realis purposive use of -lə.

- (121) *ingiə-sə tʰuɡa gogotʂən-lə dadzia-la*
 and.so-DL chicken pigeon-CM everybody-PL

ɕiniə-lə tɕi-ji-wo. MP:69-72

laugh-SP begin-BVS-PRF

And so the chicken and the pigeon and everybody with them started to laugh.

In this construction, the medial verb marked by -lə and the following verb are also construed as a single event. But in this case, the modality of the medial verb is not irrealis as it is in the previous construction, it is realis.

Syntactically, the realis purposive use of -lə is identical to the irrealis purposive use. A verb marked by -lə must be immediately followed by another verb with nothing intervening. In this construction, however, the semantic limitation on the following verb is even more restricted. The verb *tɕiji* ‘to begin, to start’ is the only one that I have encountered thus far.¹⁴⁹ The verb *tɕiji* used in this construction is actually borrowed from the Chinese verb *qǐ* ‘to rise up’ with the BVS suffix *-ji*. In Chinese, this verb is usually a directional verb, but when it is used in the inchoative sense in Chinese it loses some of its directional meaning. This is very similar to its use in Santa where its meaning is ‘to begin’. The inchoative meaning probably developed out of ‘to rise up and do something’. Whether this verb was originally borrowed with the directional or the inchoative sense is not clear at this point.

¹⁴⁹ In looking at other data, I have also found the borrowed Chinese verb *kāi* which is used in inchoative constructions and disyllabic compounds with inchoative meanings.

8.3.8.5.3 Summary

We have seen that the -lə clause and the following clause constitute a single event and that the temporal/semantic relationship is one of purpose. However, due to the syntactic and lexical restrictions of this construction, it is probably best analyzed as a *purposive complement* marker rather than a switch-event marker. Therefore, I will not be including -lə in my discussion henceforth. An updated version of the eventhood-continuity is given in (122).

(122) The Eventhood-Continuity Continuum (1st Revision):

Most Continuity		Least Continuity	
-Ø	-dzi	=dənə	-sə

8.3.8.6 -Ø Same event/Integrative (SN)

There are 61 instances of zero-marked non-finite verbs in the database. Out of 269 instances of non-finite verbs, it occurs 23% of the time.

As indicated above, the primary function of -Ø is to specify 1) that the unmarked verb and the following verb are the *same* event; and 2) that there is a temporal/semantic relationship of *integration* between the two verbs. This temporal/semantic relationship is similar to simultaneity, as discussed in section 8.3.8.4 above, except that there is a higher degree of semantic integration. An example of this is given in (123).

- (123) “bi aji-Ø xolu-Ø hətsə-Ø bucin-da+dziwo.” F11:34
 1SGNM afraid-SN run-SN tire-SN weak-VAS+PROG
“I am running because I was afraid and I have become so tired I am weak.”

In this example, the verbs aji ‘to be afraid’, xolu ‘to run’, hətsə ‘to tire’ are all unmarked. hətsə ‘to tire’ is linked to the following verb bucinda ‘to become weak’ which is finite and is marked with the progressive aspect. The

actions represented by this string of verbs are semantically integrated to a high degree.

As with the previous example, example (124) repeated from (93) above, constructions of this type are difficult to translate into idiomatic English without losing some of the semantic integration present in Santa.

(124) “bi xolu-Ø anda-Ø irə-wo.” F08:37

1SGNM run-SN escape-SN come-PRF

“I ran and escaped.” or “I escaped by running.” or “I came by means of escaping by running.”

Iconically, the use of -Ø marking between two clauses would suggest that two clauses so linked are more integrated than clauses linked by an overt marker. This seems to be borne out by the fact clauses that follow -Ø seem to have a higher degree of continuity than those that follow -sə, =dənə, or -dzi.

8.3.8.6.1 Alternation of -Ø with -dzi

The integrative nature of -Ø marking can be understood more clearly when we look at how -Ø alternates with -dzi. A good illustration of -Ø alternating with -dzi is given in example (107) above repeated as (125) below.

(125) ¶ atciə-də niə 'basi wo, F08:1

long.ago-LC one tiger EXST

ənə giəru-dzi irə-sə niə tauləi xolu-dzi giəru-dzi irə-wo. F08:2

his cross-SS come-DL one rabbit run-SS cross-SS come-PRF

tauləi xolu-Ø giəru-dzi irə-sə ja ənə 'basi bari=dənə agi-wo. F08:3

rabbit run-SN cross-SS come-DL PRT this tiger catch=DQ take-PRF

Long ago there was a tiger. As he was crossing, a rabbit came running across. As the rabbit came running across, the tiger caught him and took him.

In F08:2 above, the verb xolu ‘to run’ has been linked to the verb giəru ‘to cross’ by -dzi. This means they constitute a single simultaneous event along with the final verb irə ‘to come’. But in the next sentence the verb xolu has been linked to the verb giəru by -Ø rather than -dzi. Thus in the re-cap clause in F08:03, which restates the last half of F08:02, the relationship between xolu ‘to run’ giəru ‘to cross’ is even more integrated or closely connected than before.

Another example of an alteration between -Ø and -dzi is shown in (126). (F07:41 is example (112) above).

- (126) ingiə-sə ənə 'basi dzuadzua biçi-dzi ogi-dzi niəndə
and.so-DL this tiger claw tightly-DE give-SS quickly

mutuŋ-də fuija-dzi gaŋgana-ka-wo. F7:40
tree-LC tie-SS stretch-CS-PRF

fuija-Ø gaŋgana-ka=dənə ənə kuŋ qari-dzi giə-də-nə irə=dənə
tie-SN stretch-CS=DQ this person return-SS house-LC-RP come=DQ

niəndə otši-dzi idziə-dzi gau-də=dənə qudoro-nə uŋu-dzi ətši=dənə
quickly drink-SS eat-SS good-VS=DQ knife-RP take-SS go=DQ

ənə 'basi-ni arasuŋ-ni amitu tsoji=dənə agi-wo. F07:41
this tiger-GN skin-AC alive peel.off=DQ take-PRF

And so the tiger gave his claw which was quickly stretched [-dzi] and tied to the tree.

After stretching [-Ø] (the rope) and tying (him to the tree), the man returned to his home, quickly ate and drank until he was full, took his knife with him, and peeled off the tiger's skin while he was still alive; then he took the skin (and left).

A similar explanation applies in this case. In F7:40, the verb fuija ‘to tie’ is linked to the verb gaŋgana ‘to stretch’ by -dzi. But when the last portion of

F07:40 is repeated in the re-cap clause in F7:41, -Ø is used instead of -dzi. Because there has already been an overt syntactic marker used to specify the relationship between these two verbs in F07:40, once these two verbs are restated in the re-cap clause in F07:41, there is no need to restate the already established relationship. It can be argued that this non-use of -dzi in a re-cap clause is evidence that verbs linked by -Ø have a higher degree of continuity than ones that are linked by other markers.

It is important to note that -Ø alternates with only -dzi, not with -sə or =dənə. This is, of course, additional support for my analysis of the Santa switch-event markers. -Ø can only alternate with -dzi because it is a same-event marker and not with -sə and =dənə because they are different-event markers.

8.3.8.6.2 *Summary*

We have seen that the -Ø marked clause and the following clause constitute a single integrated event.

With respect to the eventhood-continuity continuum, a single event comprised of integrated actions can be understood as having a high degree of continuity. With respect to change in participants, 97% of the clauses that follow have the same subject.

8.3.9 Discussion of the other non-finite markers

In this section I will discuss the remaining non-finite verbal markers, +sənu, -talə. The data used for this discussion is the larger body of data discussed in Chapter 2.

It should be noted that both +sənu and -talə may be used restrictively. (See section 8.3.2 above.) Thus, there is some evidence that suggests that clauses containing these markers are adverbial. However, as mentioned above, further typological research is needed to show whether cosubordinate clauses may be used restrictively. Thus, for now, I will not draw any conclusions at this point as to whether +sənu and -talə are primarily used as to mark adverbial clauses.

8.3.9.1 +sənu Different event/Immediate sequential (DM)

There were 45 instances of the non-finite marker +sənu in the larger body of data used for my dissertation. In almost all these instances of +sənu, the subject remains the same from the +sənu marked clause to the next. More importantly, the clause following the +sənu marked clause is a different event. How then is +sənu different from =dəna, which has a similar function? In my opinion, clauses linked with +sənu have a greater degree of continuity than clauses marked by =dəna. This greater degree of continuity is reflected in a temporal/semantic relationship of *immediate sequentiality*. This is best glossed as ‘as soon as’. In other words, once the event of the +sənu marked clause is finished, the action of the next clause immediately begins.

In the following extended example, the body of the lama has been carried off in a chest by hoodlums thinking it was full of silver. Once they see it is a dead body, they run off. As soon as the boy finds the body (immediate sequentiality), he pulls him into a rich person’s bean field.

(127) mo dʒiərə ətʃi=də ɕiɑŋdzi-ni niə-sə niə fugu-sən kuŋ wo. A1:122
road on go=DQ chest-AC open-DL one die-P.NM person COP.S

ənə-la niəndə aji=dəna xolu-ndu wəida-wo. A1:123
this-PL suddenly afraid=DQ run-C/R disappear-PRF

ənə kəwaŋ lama-ni əri-dʒi olu+sənu
this boy lama-AC find-SS can+DM

niə baŋaŋ kuŋ-ni pudʒa ɡadʒa dʒiərə ətʃi-wo. A1:124
one rich person-AC bean field on go-PRF

After going on the road, they opened the chest, and there was a dead person in it. They were suddenly afraid, and ran off together and disappeared.

As soon as the boy found the lama's body, he pulled him onto a rich person's bean field.

Example (128) has examples of both =dənə and +sənu.

- (128) əkɯ=dənə hə qari-dzi giə-də-nə ətsi+sənu
 beat=DQ 3SGNM return-SS house-LC-RP go+DM

Guraŋ sara godziəlu da-wo. T5:87
 three month move unable-PRF

After being beaten, as soon as he returned to his house, he was unable to move for three months.

After he is beaten, somehow he returns home. The relationship between these two events is one of sequentiality. But as soon as he returns home, not before, he is unable to move. Therefore it seems that the relationship expressed by +sənu between two events is more semantically marked than the one expressed by =dənə. The fact that +sənu occurs less frequently than =dənə may also be a reflection that it is more marked.

Another example of +sənu is given below.

- (129) dziəfaŋ giə+sənu tugai giə-wo. N2:110
 liberation do+DM land.reform do-PRF

As soon as the liberation happened, there was land reform.

In this example, land reform follows soon after liberation. In this case, the relationship of immediate sequentiality is expressed metaphorically over a larger time depth. It is understood that political reform may take a while to implement due to the nature of government, but in this case the government is being praised for quick and expedient action.

If we were to include +sənu in the eventhood-continuity continuum, it would fall in between =dənə and -dzi, as shown in (130).

(130) The Eventhood-Continuity Continuum (2nd Revision):

<u>Most Continuity</u>			<u>Least Continuity</u>	
-Ø	-dzi	+sənu	=dənə	-sə

8.3.9.2 -tala

The non-finite marker -tala is used on clauses to express ‘up until that point in time’. So in (131), the clause bi uliə irətala ‘as long as I do not come’ is used to express a limitation on a time frame for the clause that follows. In other words, in (131), as long as the limitation expressed in the -tala clause holds, then the restriction expressed in the second clause holds.

- (131) “bi uliə irə-tala
1SGNM 1.NEG come-LMT

kiən irə liaudzə ta wəidziən-ni bu niə-Ø.” T2:014
who come no.matter 2SGPL door-AC IMPR.NEG open-IMPR
“As long as I do not come, no matter who comes, do not open the door.”

A similar example is given in (132) where the father will not give his daughter for marriage unless he sees the husband.

- (132) “mi-ni ənə otçin-ni kiən kərau-sə
1SG-GN this daughter-AC who want-DL

bi quəŋ-ni uliə udzə-tala uliə ogi=nə.” T5:07
1SGNM husband-AC 1.NEG see-LMT 1.NEG give=IMP

“Whoever wants this daughter of mine, as long as I do not see the (future) husband, I will not give [her].”

Example (133) expresses a limitation on time, so that qarantala ‘the whole day until dark’, nothing is eaten or drunk. What is unusual about this case is that -tala is apparently not suffixed to a verb, unless the n on the adjective qara ‘black’ is a derivational verb suffix I have not yet encountered. This n is more likely a nominal suffix. If so, this may show that -tala is a clitic, and is not necessarily directly suffixed to verbs. The grammatical status of -tala deserves further study.

- (133) udu=ni niə udu qaran-tala uliə otʃi dʒi uliə idʒiə=nə. N1:007
 day=TM one day black-LMT I.NEG eat and I.NEG drink=IMP
The whole day until dark,[we] do not eat or drink.

8.3.10 Further support for the eventhood-continuity continuum

This section includes two objective evaluations which provide further empirical support for the continuity continuum. These are 1) the grammatical category of the word immediately following the switch-event marker; and 2) whether a pause occurs after the switch-event marker in spoken texts or not.

8.3.10.1 Grammatical category of the immediately following word

In this section I will look at the grammatical category of the word that immediately follows any switch event-marker. My hypothesis here is that verbal elements will occur more often after switch-event markers that marked a greater degree of continuity in the following clause. The switch-event markers -sə and =dənə specify a lesser degree of continuity and are thus more likely to be immediately followed by a nominal element than the other markers. The function of this nominal element will more than likely be to introduce a different participant. The switch-event markers -dʒi, and -Ø specify a higher degree of continuity and are thus more likely to be followed by a verbal element. This is because there is less likely to be a change in participant after switch-event markers that have a greater degree of continuity.

One verb immediately following another is not necessarily indicative of a change in event in Santa, since more than one verb may be used to describe the same event. Thus, a change in event is much more likely if a medial verb is followed by a nominal rather than a verbal.

Grammatical categories of the following word have been generalized into three cover categories: nominals, verbals, and others. Nominals include nouns, pronouns, determiners, numerals, and measure words. Verbals include verbs,

adverbs,¹⁵⁰ and predicate adjectives. Items covered in the ‘Others’ category include nominalized verbs and some grammatical morphemes which were difficult to assign to either the nominal or verbal category. However, there were so few of these that their assignment to either one category or the other would not significantly change the findings summarized in Table 8.53.

Suffix	Nominals		Verbals		Others		Total
-sə	61	78%	13	17%	4	5%	78
=dənə	23	53%	20	47%	0	0%	43
-dzi	12	17%	57	79%	3	4%	72
-Ø	5	8%	56	92%	0	0%	61

Table 8.53: Grammatical category of immediately following word

The findings in Table 8.53 correspond precisely to what my hypothesis predicts. Event-markers that mark clauses with the least continuity, -sə and =dənə, are followed by nominals to a greater degree than event markers that mark clauses with the most continuity, -dzi, and -Ø. Moreover, the order of the event-markers with respect to the following category corresponds exactly with the eventhood-continuity continuum in (130) above.

8.3.10.2 Pauses in a spoken text

In this section I looked at pauses in the only spoken text included in the database for this study on switch-event markers, MP. All pauses and their length were transcribed. I looked at each switch-event marker in the text and noted whether a pause followed it or not. Then I grouped these pauses into their respective lengths: N is no pause, < .4 is less than four-tenths of a second, < .7 is

¹⁵⁰ I have included adverbs with verbs, although the presence of an adverb would indicate less continuity than the presence of a verb. However, since adverbs normally precede verbs, I believe the presence of an adverb would indicate more continuity than the presence of a nominal.

greater than four-tenths of a second and less than seven-tenths of a second, > .7 is greater than seven-tenths of a second.

My hypothesis is that for those event markers that have the lesser degree of continuity, -sə and =dənə, that they will more likely be followed by a pause in spoken discourse than those switch-event markers that have a higher degree of continuity, -dzi, and -Ø. The correlation of a pause following a switch-event marker in my opinion is a cognitive reflection of a lesser degree of continuity. The findings are summarized in Table 8.54.

Suffix	N		< .4		< .7		> .7		Total
+sənu	0	0%	0	0%	0	0%	2	100%	2
-sə	2	22%	1	11%	0	0%	6	66%	9
-dzi	2	50%	0	0%	2	50%	0	0%	4
-Ø	7	88%	0	0%	1	12%	0	0%	8

Table 8.54: Summary of pauses following switch-event markers in MP

It is agreed that the switch-event marker tokens in this text are relatively few. Altogether there were only 25 switch-event markers. 2 of these were instances of +sənu which were covered briefly in section 8.3.9.1 above. However, I believe the results are instructive and enlightening, nonetheless.

The switch-event marker -sə, which indicates the following clause will have a low degree of continuity, is associated with a pause 78% of the time. The switch-event markers -dzi and -Ø, which indicate the following clause will have a fairly high degree of continuity are associated with pauses 50% and 12% of the time respectively. However, the longer pauses associated with both instances of +sənu may be evidence against my analysis in section 8.3.9.1 above. Unfortunately, there were no instances of =dənə in this text. In any case, these results lend some support to the eventhood-continuity continuum. However, more spoken texts need to be analyzed to corroborate these findings.

8.3.11 Conclusion

I have shown that the medial verb suffixes in Santa are better described as switch-event markers rather than switch-reference markers. Each switch-event marker a) specifies whether the event coded in the following clause is the same or different; and b) signals the semantic/temporal relationship of the clause to the following one. I have also shown that the continuity of the clause that follows a verb marked by a switch-event marker has a higher or lesser degree of continuity depending on which switch-event marker it follows. Therefore these switch-event markers constitute an eventhood-continuity continuum.

Chapter 9

Texts

9. Introduction

In this chapter I have included two short texts, collected in Linxia, Gansu Province in 1990. These texts are presented by intonation units, rather than clauses. An *intonation unit* is a unit of speech that occurs in natural discourse that is unified by a single intonation contour.

For each intonation unit transcribed, the first line contains transcription conventions from Du Bois et al. (1993). The second line is divided into morphemes and does not employ Du Bois et al. (1993) transcription conventions. Rather, normal punctuation as you might find it in a written text is used. The third line is a morpheme-by-morpheme gloss.

Following each text is a free translation with references to intonation unit numbers. Some intonation units are not numbered for consistency with my database.

Before presenting the texts, I want to briefly discuss the transcription conventions that I am using from Du Bois et al. (1993). As mentioned above, each line in the text is an intonation unit, and thus represents a unified intonational contour. A period '.' is used at the end of an intonation unit to indicate a final intonation unit contour; a comma ',' is used to indicate a continuing contour; and a double-hyphen is used to indicate a truncated contour. Intonational contours do not necessarily correlate with syntactic boundaries.

Pauses of three types have been indicated: short, medium, and long. Pauses most often occur between intonation units. When this is the case, the pause is marked at the beginning of the line.

A few other conventions have been used as well: '=' is used to indicate non-phonemic lengthening, '-' is used to indicate a truncated word, and '(Hx)' is used to indicate exhalation.

The transcription conventions used from Du Bois et al. (1993) are summarized below.¹⁵¹

Intonational contour class

- . Final intonation unit contour
- , Continuing intonation unit contour
- Truncated intonation unit contour

Pauses

- .. Short pause (less than .4 seconds)
- ... Medium pause (more than .4 seconds but shorter than .7 seconds)
- ...() Long (timed) pause (.7 seconds or longer, exact length in parentheses)

Other Symbols

- = Non-phonemic segment lengthening
- Truncated word
- (Hx) Exhalation

¹⁵¹ I have also used quotation marks for quotations in the first line of transcription. This is not a Du Bois et al. (1993) transcription convention.

9.1 The magpie and the pheasant

Genre: Folktale, somewhat planned (Hand-written in Chinese on a piece of paper and then told in Santa as he followed the text on the paper.)

Tape recorded: 7-11-90

Narrator: Mǎ Kèxiáng

... m=.

m

Mm

...(8) sadziɿi=.

sadziɿi

01 magpie

...(8) gogotʂən=.

gogotʂən

02 pigeon

...(8) tuŋa=.

tuŋa

03 chicken

...(7) jadzi=.

jadzi

04 duck

...(7) ga'ladzi=.

ga'ladzi

05 pheasant

...(1.8) niə= ... ula kuandə ... nadudziwo.
 niə ula kuən-də nadu+dziwo.
 06 one mountain foot-LC play+PROG

...(2.2) tʉga,
 tʉga
 07 chicken

...(2.6) kiəliədziwo.
 kiəliə+dziwo,
 08 say+PROG

...(1.4) “Ga'ladzini ənə,
 Ga'ladzi-ni ənə
 09 pheasant-GN this

...(9) jawudan,
 jawu-dan
 10 walk-style

...(1.1) bəlia gau.
 bəlia gau.
 11 extremely good

...(1.4) udzədzi səikən xun.”
 udzə-dzi səikən xun.
 12 look-SS handsome very

...(3.2) sadziɿi,
 sadziɿi
 13 magpie

...(1.1) nafu u wo.
 nafu u wo.
 14 satisfaction PS.NEG have

...(1.2) kiəliə,
 kiəliə,
 15 say

...(3.1) “həji jaŋ= --
 hə-ji jaŋ --
 16 3SG-GN what

...(2.5) ə,
 ə
 uh

.. həji jaŋ wainə.
 hə-ji jaŋ wainə.
 17 3SG-GN what have

...(2.1) həji bi niə udusə dʒiu,
 hə-ji bi niə udu-sə dʒiu
 18 3SG-NM 1SGNM one day-AB then

...(1.3) suruwo ma.”
 suru-wo ma.
 19 learn-PRF PRT

...(2.5) iŋgiəsə,
 iŋgiə-sə
 20 and.so-DL

- ...(1.4) dadziala,
dadzia-la
21 everynody-PL
- ...(1.8) dau uliə piɕiərənə.
dau uliə piɕiərə=nə.
22 still I.NEG believe=IMP
- ...(3.1) sadziɕi,
sadziɕi
23 magpie
- ...(1.4) ɢa'ladzidə kiəliədziwo.
ɢa'ladzi-də kiəliə+dziwo,
24 pheasant say+PROG
- ...(1.7) “tɕi mada,
tɕi ma-də
25 2SGNM 1SG-DT
- ... niə udu suɤa dɕiu olowo (Hx).”
niə udu su-ɤa dɕiu olo-wo.
26 one day learn-CS then satisfactory-PRF
- ...(3.0) iŋgiəsə ɢa'ladzi dajɪŋ giədziwo.
iŋgiə-sə ɢa'ladzi dajɪŋ giə+dziwo.
27 and.so-DL pheasant agree do+PROG
- ...(3.6) ɢa'ladzi,
ɢa'ladzi
28 pheasant

- ...(1.0) sadzixidə,
 sadzixi-də
 29 magpie-DT
- ... dzi niə udu,
 dzi niə udu
 30 only one day
- ... jawudan .. surukawo.
 jawu-dan suru-ka-wo.
 31 walk-style learn-CS-PRF
- ...(3.3) sadzixi niə udu surusə,
 sadzixi niə udu suru-sə,
 32 magpie one day learn-DL
- ...(1.3) kiəliə mə,
 kiəliə mə,
 33 say PRT
- ... “ənə jaŋnə,
 ənə jaŋ-nə
 34 this thing-RP
- ... jama puʃi wo (Hx).
 jama puʃi wo.
 35 anything COP.NEG COP.S
- ...(8) idziŋ suruwo (Hx).
 idziŋ suru-wo.
 36 already learn-PRF

- ...(.9) surudzi idziŋ,
 suru-dzi idziŋ
 37 learn-SS already
- ...(.9) ɕa'ladzisə,
 ɕa'ladzi-sə
 38 pheasant-AB
- ... jawudan dau gau (Hx)."
 jawu-dan dau gau.
 39 walk-style still good
- ...(.1.4) iŋgiə pəsə əsə suru dziu,
 iŋgiə pəsə əsə suru dziu
 40 and.so again R.NEG learn then
- ...(.8) 'baluwo.
 'balu-wo.
 41 finish-PRF
- ...(.1.7) giədu udu dawasənu,
 giədu udu dawa+sənu,
 42 some day pass+DM
- ...(.1.3) sadziŋi,
 sadziŋi
 43 magpie
- ...(.1.0) gudzuŋnə dʒidaʔasənu,
 gudzuŋ-nə dʒi-da-ʔa+sənu,
 44 neck-RP stick.out-BVS-CS+DM

- ...(2.4) tʰuɣa,
tʰuɣa
45 chicken
- ... gogo- --
gogo- --
46 pigeon
- ... gogotʂənɬədə kiəliədʒiwo.
gogotʂən-ɬə-də kiəliə+dzɪwo,
47 pigeon-CM say+PROG
- ...(1.5) “bi idʒɪŋ,
bi idʒɪŋ
48 1SGNM already
- .. ɣa'ladʒini jawu- --
ɣa'ladʒi-ni jawu- --
49 pheasant-GN walk
- ... jawudəŋni suruwo (Hx).”
jawu-dəŋ-ni suru-wo.
50 walk-style-AC learn-PRF
- ...(1.5) tʰuɣa kiəliədʒiwo.
tʰuɣa kiəliə+dzɪwo,
51 chicken say+PROG
- ...(8) “tʂi niə jawudʒi,
tʂi niə jawu-dʒi
52 2SGNM one walk-SS

- ... bidziən niə udzəjə (Hx).”
bidziən niə udzə-jə.
- 53 1PLEXNM one look-DES
- ...(3.3) ingiəsə sadziḱi,
ingiə-sə sadziḱi
- 54 and.so-DL magpie
- ...(1.1) jawulə tɕijiwo (Hx).
jawu-lə tɕi-ji-wo.
- 55 walk-SP begin-BVS-PRF
- ...(2.3) niə jawusə,
niə jawu-sə
- 56 one walk-DL
- ...(7) hə godzianəni,
hə godzia-nə-ni
- 57 3SG self-RP-GN
- ...(1.5) jawudaḱni,
jawu-daḱ-ni
- 58 walk-style-AC
- ... martadziwo.
marta+dziwo.
- 59 forget+PROG
- ...(1.0) surusanji,
suru-san-ji
- 60 learn-P.NM-AC

- ... dziši niə udu surudzi.
dziši niə udu suru-dzi,
61 only one day learn-SS
- ...(8) jə martawo.
jə marta-wo.
62 also forget-PRF
- ...(2.1) ingiəsə,
ingiə-sə
63 and.so-DL
- ...(2.0) godzianənukun martawo,
godzia-nə-nukun marta-wo.
64 self-RP-belong forget-PRF
- ... surukuji suka dawo.
suru-ku-ji su-ka da-wo.
65 learn-I.NM-AC learn-CS unable-PRF
- ...(1.0) jawu mədziə dawo.
jawu mədziə da-wo.
66 walk know unable-PRF
- ...(3.3) dziši,
dziši
67 only
- ...(7) tʂatʂadzi dʒiauli tɕijiwo.
tʂa-tʂa=dʒi dʒiauli-Ø tɕi-ji-wo.
68 ONOM-ONOM=DE jump-SN begin-BVS-PRF

.. (Hx).
(Hx)

...(3.0) ingiəsə,
ingiə-sə
69 and.so-DL

...(1.0) tʰuɡa .. gogotʂənlə,
tʰuɡa gogotʂən-lə
70 chicken pigdeon-COM

... (Hx),
(Hx)
71

... dadʒialə ɕiniələ tɕijiwo.
dadʒia-lə ɕiniə-lə tɕi-ji-wo.
72 everybody-CM laugh-SP begin-BVS-PRF

... tɕi niə jaŋ suɤawo.
tɕi niə jaŋ su-ɤa-wo?
73 2SGNM one what learn-CS-PRF

... godʒianənukʊŋni martawo.
godʒia-nə-nukʊŋ-ni marta-wo.
74 self-RP=belong-AC forget-PRF

...(9) kuŋnukʊŋni suru dawo.
kuŋ-nukʊŋ-ni suru da-wo.
75 person-belong-AC learn unable-PRF

...(1.5)	ənəji	kiəliə	kuʃi,				
	ənə-ji	kiəliə	kuʃi				
76	this-AC	say	story				
...							
...(1.0)	jaʁaniə		surusə,				
	jaʁaniə		suru-sə,				
77	extremely.well	learn-DL					
...							
...(9)	idʒiŋ	jəu,					
	idʒiŋ	jəu					
78	already	have					
...							
	surudʒi,						
	suru-dʒi						
79	learn-SS						
...							
	daudʒia	giəsə	dʒiu	tʃu	olonə.		
	daudʒia	giə-sə	dʒiu	tʃu	olo=nə.		
80	reach.a.high.level	do-DL	then	SUP	satisfactory=IMP		
...							
	pəsə	dʒiu	godʒianuʁuŋni		martanə,		
	pəsə	dʒiu	godʒia-nuʁuŋ-ni		marta=nə.		
81	again	then	self-belong-AC		forget=IMP		
...							
	kuŋnu- --						
	kuŋ-nu- --						
82							
...							
	kuŋnuʁuŋji,						
	kuŋ-nuʁuŋ-ji						
83	person-belong						

... jə suru danə.
 jə suru da=nə.
84 also learn unable=IMP

...(1.3) barawo.
 bara-wo.
85 finish-PRF

(01) A magpie, pigeon, chicken, duck, and pheasant were playing at the foot of a mountain. (07) The chicken was saying, "The walking style of the pheasant is extremely good. It looks very handsome." (13) The magpie is not satisfied and says, "What does he have? I will have learned his walking style in one day's time." (20) And so everybody still did not believe it. (23) The magpie says to the pheasant, "You teach me for one day, then that's enough." (27) And so the pheasant agrees. (28) The pheasant for only one day taught the magpie his walking style. (32) The magpie after learning for one day says, "This thing of his isn't anything. I have already learned it. (37) Having already learned it, compared to the pheasant, my walking style is better." (40) And so still not having learned it, he finished. (42) After some days had passed, sticking his neck out (with pride), he says to the chicken and the pigeon, "I have already learned the pheasant's walking style." (51) The chicken says, "We want to watch a little while you walk a bit." (54) And so the magpie began to walk. (56) After walking a bit, he forgets his own walking style. (60) What he had learned from one day of learning, he also forgot. (63) And so the things that belonged to himself he forgot. (65) What he would learn, he is unable to be taught. (66) He does not know how to walk. (67) He just began to jump around 'cha-cha' like. (69) And so the chicken and the pigeon along with everybody began to laugh. (73) What were you taught? (74) The things that belong to one's self are forgot. (75) The things that belong to other people you are unable to learn. (76) What this story says is, if you learn extremely well what you already have, then learning will reach the highest level and will be the most satisfactory. (81) And yet things that belong to ones self will be forgotten. (83) The things that belong to other people one is also unable to learn. Finished.

9.2 A boy and his horse

Genre: Unplanned short narrative of a real life experience

Tape recorded: 7-25-90

Narrator: Mǎ Jùn

- ... bi= niə fa,
 bi niə fa
- 01 1SGNM one time
- ...(7) mo dʒiərə= pəŋdʒisən niə ʃitɕiŋ,
 mo dʒiərə pəŋ-dʒi-sən niə ʃitɕiŋ.
- 02 road on meet.unexpectedly-BVS-P.NM one affair
- .. niə kiəliəjə.
 niə kiəliə-jə.
- 03 one say-DES
- ...(1.9) niə fadə.
 niə fa-də
- 04 one time-LC
- ... bi dʒəŋ= mo dʒiərə jawudʒi saudʒiwo.
 bi dʒəŋ mo dʒiərə jawu-dʒi sau+dʒiwo.
- 05 1SGNM in.the.process road on walk-SS stay+PROG
- ...(1.4) jawudʒi=,
 jawu-dʒi
- 06 walk-SS
- ...(1.1) jawukudə.
 jawu-ku-də,
- 07 walk-I.NM-LC

- ...(2.1) miji quina miəndə niə,
 mi-ji quina miən-də niə
 08 1SG-GN behind side-LC one
- ...(1.6) ga kəwəŋ niə mori unu,
 ga kəwəŋ niə mori unu-Ø
 09 small boy one horse ride-SN
- ...(7) idzi miji ku irəwo.
 idzi mi-ji ku irə-wo.
 10 all.the.way 1SG-AC with come-PRF
- ...(1.9) jawu jawu masə məliəʃilawo,
 jawu-Ø jawu-Ø ma-sə məliəʃi-la-wo.
 11 walk-SN walk-SN 1SG-AB in.front.toward-VS-PRF
- ... məliəʃila niə əkəŋdə,
 məliəʃi-la-Ø niə əkəŋ-də
 12 in.front.toward-VS-SN one village-LC
- .. dzəŋ=,
 dzəŋ
 13 in.the.process
- ...(1.1) niə əkəŋ udzudə ətʃisə.
 niə əkəŋ udzu-də ətʃi-sə,
 14 one village edge-LC go-DL
- ... ənə əkəŋsə niə no- --
 ənə əkəŋ-sə niə
 15 this village-AB one

- .. nokəi b- --
 nokəi
- 16 dog
- ...(9) ba=dzi quri irəwo.
 ba=dzi quri-Ø irə-wo.
- 17 suddenly=DE come.out-SN come-PRF
- ...(1.8) quri irə ixəu,
 quri-Ø irə ixəu,
- 18 come.out-SN come after
- ... mori niə əjisə,
 mori niə əji-sə,
- 19 horse one afraid-DL
- ...(1.4) niə tşəjisə,
 niə tşə-ji-sə,
- 20 one surprised-BVS-DL
- ...(1.3) niə dzulu .. xoluwo,
 niə dzulu xolu-wo.
- 21 one while run-PRF
- ...(1.3) xoludzi xoludzi ingiəsə,
 xolu-dzi xolu-dzi ingiə-sə
- 22 run-SS run-SS in.this.way-DL
- ...(1.4) niə dзиаulisə ənə kəwəŋ anda bau irəwo.
 niə dзиаuli-sə ənə kəwəŋ anda-Ø bau-Ø irə-wo.
- 23 one jump-DL this boy release-SN fall-SN come-PRF

- ... mori dʒiərəsə.
 mori dʒiərə-sə.
- 24 horse on-AB
- ...(3.3) anda bau irə ənə kəwəŋ uiladʒi saudʒiwo.
 anda-Ø bau-Ø irə-Ø ənə kəwəŋ uila-dʒi sau+dʒiwo.
- 25 release-SN fall-SN come-SN this boy cry-SS sit+PROG
- ... mori,
 mori
- 26 horse
- ... niə xolu baiwo.
 niə xolu-Ø bai-wo.
- 27 one run-SN stop-PRF
- ...(1.8) bi şida dzəŋ jawudʒi ətʃi ixəu,
 bi şida dzəŋ jawu-dʒi ətʃi ixəu,
- 28 1SGNM close in.the.process walk-SS go after
- ...(3.2) ənə kəwəŋni fuji bosi irəkawo.
 ənə kəwəŋ-ni fu-ji-Ø bosi-Ø irə-ka-wo.
- 29 this boy-AC help-BVS-SN rise.up-SN come-CS-PRF
- ...(3.3) şaŋʃidə dʒiərə niə udzəsə,
 şaŋʃidə dʒiərə niə udzə-sə,
- 30 body on one look-DL
- ...(3.4) ənə kəwəŋni odəusə,
 ənə kəwəŋ-ni odəu-sə
- 31 this boy-GN knee-AB

- ... tʃʊsʊŋ qʊrɪdʒɪ ɪrədʒɪwo.
tʃʊsʊŋ qʊrɪ-dʒɪ ɪrə+dzɪwo.
32 blood come.out-SS come+PROG
- ...(3.7) ɪŋɡɪə bi mɔrɪ,
ɪŋɡɪə-Ø bi mɔrɪ
33 and.so-SN 1SGNM horse
- ...(8) lɑjɪdʒɪ ʃɪdɑ ətʃɪ xɑ,
lɑjɪ-dʒɪ ʃɪdɑ ətʃɪ xɑ,
34 pull-SS close go PRT
- ...(1.0) ənə kəwɑŋni,
ənə kəwɑŋ-nɪ
35 this boy-AC
- ... fʊjɪdʒɪ mɔrɪ dʒɪərə pəsə qʊrɪkɑwo.
fʊ-jɪ-dʒɪ mɔrɪ dʒɪərə pəsə qʊrɪ-kɑ-wo.
36 help-BVS-SS horse on again go.up-CS-PRF
- ...(2.2) ɪŋɡɪəsə ənə kəwɑŋ,
ɪŋɡɪə-sə ənə kəwɑŋ
37 and.so-DL this boy
- ... unu mɪjɪ məliə,
unu-Ø mɪ-jɪ məliə
38 ride-SN 1SG-GN in.front
- ...(7) ʃɑwʊlɑwo.
ʃɑwʊ-lɑ-wo
39 walk-VS-PRF

(01) I will speak of an an affair I unexpectedly came upon. (04) One time I was walking on the road. (06) And while I was walking and walking, I was behind a small boy riding a horse, he came all the way with me. (11) Walking and walking he went ahead of me. (12) He was in the process of going towards a village... (14) After going to the edge of a village, from this village a dog suddenly came out. (18) After the dog came out, the horse was frightened a bit, and then surprised a bit, and then the horse ran a while. (22) After running and running in this way, the horse jumped and then this boy fell off from the horse. (25) Falling off, this boy is crying as he is sitting. (26) The horse stopped running a bit. (28) After walking up close, I helped this boy to get up. (30) I took a look on his body, and from this boy's knee, blood was coming out. (33) And so I pulled his horse close and helped the boy to get up on his horse again. (37) He rode in front of me as I walked behind.

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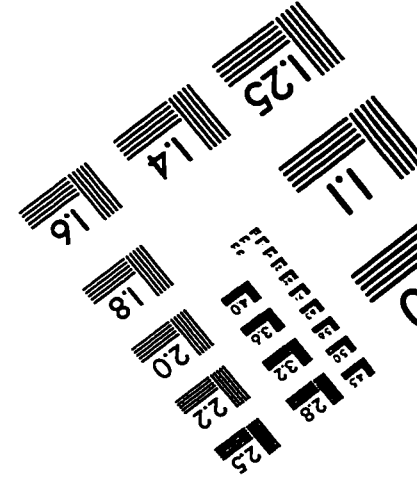
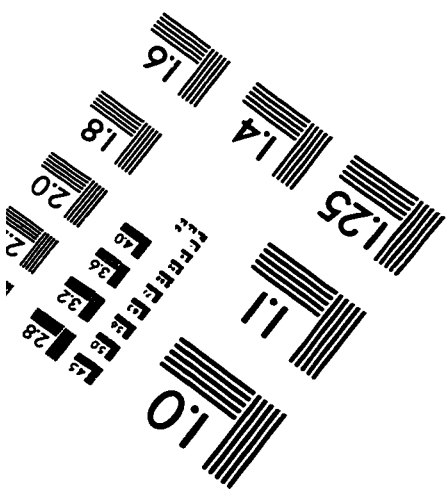
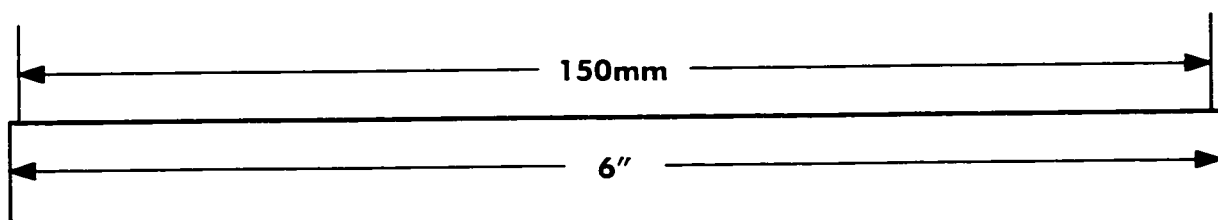
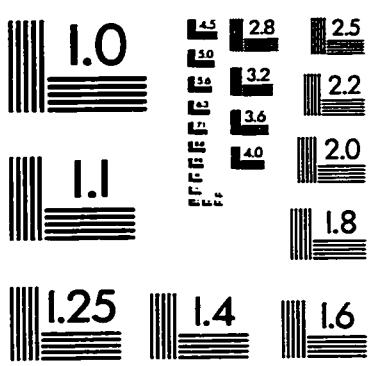
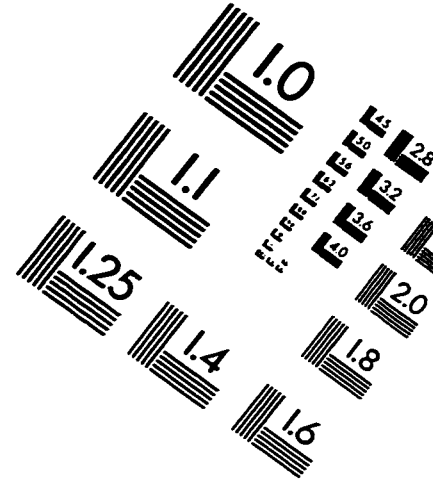
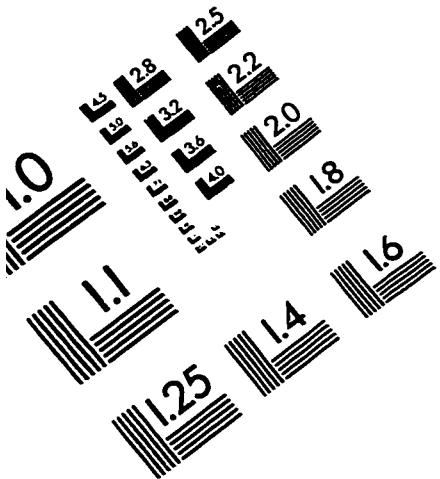
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