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Ideogram-based lexical borrowing in Japanese Sign Language

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INTRODUCTION

Linguistics of Sign Language is still a rather young discipline. In Japan, researches on this topic have started as late as the 1980s, often being published in Japanese, thus failing to reach the wider English-speaking scientific community. Because of the relative novelty of the discipline, many topics of lexicology are yet to be analysed, even more so as linguists usually focus onto morpho-syntax and phonology, considering lexicology as a simplistic and uninspired compilation of lists.

The objective of this dissertation is to show that studies on lexicology may draw a portrait of the relationships between languages and cultures. It does so by analysing a particular lexical borrowing occurring in Japanese Sign Language: an *ideogram-based* borrowing. This phenomenon results in the production of signs which imitate the shape of an ideographic character, therefore called *character signs.* Albeit several authors (e.g. Ann, 1998; Nakamura, 2006; George, 2011; Ktejik, 2013; Nonaka, et al., 2015) attested their presence in Japanese Sign Language, character signs have not received lot of attention. This is mainly because of their marginal role in sign languages altogether, as this phenomenon is unique to only four sign languages, and it has not been considered by most researchers as a distinct phenomenon. At the present day, there seems to exist no specific study on Japanese Sign Language character signs. This dissertation provides a first analysis of the *ideogram-based* borrowing and its relationship with the structure of Japanese society and with the social situation of Japanese deaf people. For this purpose, a tentative list of Japanese ideograms was compiled based on their

suitability to be borrowed; the characters of the list were then compared with the correspondent sign, looking for similarities.

The dissertation is structured as follows. Chapter 1 first provides the reader with the definitions of borrowing and of the other technical terms used in researches, and later, it explores the motivations that lead to borrowing and the relationship between borrowing and culture. Chapter 2, deals with borrowing in sign languages, both from other sign languages and from spoken/written languages. Chapter 3 thoroughly analyses ideogram-based borrowings.

CHAPTER 1
LEXICAL BORROWING

1.2 INTRODUCTION

Since the end of 19th century, when process of borrowing and loan-words became an object of study, the definition of linguistic borrowing has developed continuously. Nowadays, **lexical borrowing**, or *foreignerism* (Beccaria, 2004), is defined as a phenomenon that occurs when, after a contact between two languages, one takes one or more words from the other and incorporates them into its vocabulary (*Encyclopedia of linguistics*, 2005). More specifically, the term denotes the appropriation of words from modern languages, as the appropriation of vocabulary of extinct languages (e.g. Latin or Ancient Greek) is considered a separate phenomenon.

1.1.1 LANGUAGE CONTACT AND MOTIVATION FOR BORROWING

Language contact is a broad concept, which encompasses very different situations (e.g. contact during a travel, the study of a foreign language at school, natural acquisition during childhood, etc.). Such contact is a condition which is necessary but not sufficient to achieve borrowing. In fact, borrowing is achieved when there is a certain degree of bilingualism between the speakers of either language; in most cases, bilingualism occurs in speaker of both languages, resulting in a mutual exchange. Thomason and Kaufman (1988) proposed a

borrowing scale, in which casual contact leads to lexical borrowing, while strong cultural pressure leads to heavy structural borrowing.

Lexical borrowing from minimal contact occurred when travelers, like missionaries or seafaring traders, had to give a name to unknown items or to concepts belonging to foreign cultures; this borrowing is perceived as necessary, because it stems from the need people have to fill the gaps in their lexicon when they are not able to describe innovations they are introduced to. Hock (1986) distinguishes that the first words to be borrowed are part of a really specialized lexicon, like that one referring to technology, names of new inventions and artifacts specific to an area of a culture. This is called a ***need*** motivation.

Strong cultural pressure occurs when a disparity arises between two meeting cultures, and some kind of prestige is associated to one of them; an extended contact invariably makes this culture the donor culture, causing one-sided lexical borrowing from the subordinate culture. For this reason it is called ***prestige*** motivation. English borrowed a lot of words from French at the beginning of the second millennium, because of the influence of the French-speaking court, and the dominance of France in matter of warfare and administration of justice. Therefore, many word relating these matters had been borrowed, even in cases where English had already native words representing the same concepts ("royal" vs "king"). Core vocabulary resist change with more success, and even when "less prestigious" languages make prestige borrowing, the native ones are likely to resist, maybe coexisting with the loan words, covering two aspects of a concept. Anyway, this resistance is not absolute: English itself borrowed some of its personal pronouns from early Danes (Hock, 1986).

In recent years, language contact has been intensified by internet and mass communication, increasing the chance and the need for the people to become bilingual. This has led to a world population which is mostly bi- or multilingual. English speakers counter this trend: given the international prestige of their language, many English native speakers are proudly monolingual. The degree of bilingualism of a population differs on an individual basis. Bilinguals of high level may alternate between languages — also called ***code-switching*** — for linguistic, situational and social reasons; they can do so, though, only if they are communicating with other speakers of the same level. As the bilingualism level decreases, speakers increasingly have to resort to borrowing, transfer [1] or interference [2] to achieve a meaningful communication. All the aforementioned phenomena consist in the incorporation of features of one language in the other while speaking; when these features become permanent, linguists speak of *contact-induced change.*

Another consequence of language contact is the birth of new languages, in the form of pidgins, and creoles. Pigdins are codes created for limited communication needs, while creoles are the linguistic evolution of pidgins, shaped by children who have been exposed to a pidgin since early age. It has been supposed (Cagle, 2010) that American Sign Language could be a creole, born from French Sign Language and local sign language dialects.

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[1] Transfer is the consistent use of native words while speaking a foreign language. It is the phenomenom which is the linguistic opposite of lexical borrowing.

[2] Interference is a grammatical subconscious process: when a subject speaks a foreign language, he applies to it some rules belonging to his native language.

1.1.2 INTEGRATION OF LOANS

Lexical borrowing is more easily associated with certain types of words, since, when a word is borrowed, the receiving language has to face the issue of fitting it into its linguistic system. The likelihood of a structural category to be borrowed and/or modified after a contact between languages is commonly called *borrowability*. Core vocabulary is rarely borrowed (see Section 1.1), as it is learned at an early age, it is used more often, and it is fundamental to communication. For this reasons, speakers are usually unwilling to change it. The borrowability of specific language structures is object of an ongoing debate, but there is an agreement on nouns being the most easily borrowable, as they can readily be integrated in the syntax. A thorough account of grammatical and structural borrowing can be found in Matras (2007).

The integration in the receiving language can be achieved either through adaptation and adoption. ***Adaptation*** consists in assimilating a foreign word into the language modifying it in some of its linguistic aspects; ***adoption*** consists in the unmodified use of the borrowed word. Adaptation can be either phonological or grammatical. Phonological adaptation is used when the donor language contains phonetic structures which are not present in the receiving language, hence the borrowing language applies phonological strategies to modify the loan (for example, Japanese does not allow consonant clusters, so the borrowed English word "strike" is adapted as "sutoraiku"). Grammatical adaptation is either a syntactical or, more often, morphological modification introduced when the borrowing language either has or lacks a linguistic structure contained in the loan. The most common example is the importation of a noun from a language with gender by one without,

or conversely (Beccaria, 2004). Both adaptation and adoption can be used by the same language in different situations.

Hope (1971) deals with integration of loans in a detailed way, identifying three stages the word goes through: reception, assimilation and exploitation. The author starts the description of the process pointing out that its first mover is an individual speaker, who, when in contact with a foreign element, forms an "acoustic image" in his mind. Later, a multi-phase process of integration of the new element in the language begins. The languages taken into consideration in Hope's study are Italian and French, with reciprocal contacts starting from the twelfth century AD. The borrowed word enters in the new language and it is the object of judgment by native speakers, who have to stabilize its use in the language. Often this process is facilitated by some kind of authority, like a literary work, or important people using it in public speech (for example, Dante's "Divine Comedy" helped establishing Italian). In this first phase, the word can be modified by the speakers, but at the end of it, these modification stop, to make the word an accredited unit of the lexicon. Many times, when the borrowed word is received in the language, its loss of semantic transparency causes the modifications, that may be phonemic or morphological. It is also possible that the word is accepted without modification, if the loan word is composed by elements similar enough to native's one. If there would be an incompatibility, and there is no equivalent in the new language, the word has to be modelled to fit the new system. Therefore, linguistic borrowing is an ambivalent process: taking the language material, understanding it and breaking it down, and later, using native language rules, integrating it into the lexicon.

In the second stage, assimilation, the word is made acceptable to the receiving language, and in the third stage the word modifies the borrowing linguistics. For

example, widespread borrowing in a certain grammatical category may create an unusual unbalanced situation, which may need further modification of the general structure of the borrowing language. Currently, because of a large amount of borrowings, Japanese is directing its morphology toward nouns, penalizing verbs. Loan-words also tends to exploit the language resources, increasing the possibility of a series of phenomena like false equivalents: the presence of foreign words in the lexicon, encourages the speakers also to use freely foreign sounds or foreign words regardless of their original functions.

Therefore, because the linguistic structure of two foreign languages may differ considerably, a process of ***nativization*** of the loan is necessary.

Firstly, the phonological structure must be adapted: the foreign phonemes of the loan are replaced by the native sounds. The substitution is usually achieved using the most similar sounds, but the choice of the sound is not only determined by phonological principles: for example, English [θ] is pronounced [s] in French and [t] in German. Both languages picked one only of the two sounds, but both French and German have the sounds [s] and [t], and both sounds differ from the original by just one phonetic parameter, so the choice was completely arbitrary. Also, an individual sound can be conveyed by two or more sounds, which create a cluster that is easier to pronounce by borrowing speakers, or vice versa. All substitutions follow the phonological rules of the native language, for example, Japanese adapt every loan in order to conform them to the open syllable structure that is typical of Japanese speech. Sometimes the language itself can adapt and borrow an altogether new phoneme with a new word. The direct introduction of a word without prior modification is called adoption (see Section 1.1.2).

After the phonological modification, there is the lexical nativization. Adoption is possible also in this case. The opposite process to adoption is called loan-shift. **Loan-shift** is the borrowing of a concept by a foreign language without taking its linguistic form, but using a native word that already exists in the lexicon and adding the new meaning to it. Some languages, especially the more conservative ones, prefer this kind of borrowing, and sometimes revive the use of archaic words, giving them a new meaning.

Instead, an intermediate process between loan and loan-shift consists in **calques** or **loan translation**. This process happens when the loan-word is a morphologically complex word, like a compound, and consists in translating it literally in every component. This process can lead to syntactic modification of the original compound, because of the different syntactic rules of the borrowing language ("skyscraper" becomes "gratte-ciel", in French).

The third kind of nativization is morphological, necessary to fit the loan into the morphological system of the language. Usually the most common nativization is for gender and number. As an example, German has three morphological genders: male, female and neuter. When German borrows from English, which has no gender, formal criteria can be applied: if the loan ends like the majority of German female words, it is considered female. If this criterion cannot be used, semantic criteria are used and, if the word has clear gender connotation in the language, this gender is maintained. Last, before resorting to random assignment, the loan is associated with words of similar meaning, and, if there is a consistent gender identification with the semantic group, that gender is used.

1.1.3 IDENTIFICATION

A few ways exist to identify loan words amidst the lexicon of one language. The strictly phonetic criterion is the most obvious way, but several others can be used; the applicability of each criterion depends on the circumstances. Some loans can be identified through an orthographic criterion (when different languages use different orthographies to produce the same sound), others, through the use of specific features that a language dedicates to loan words (e.g. in Japanese, loan words are nearly always written in a dedicated syllabary that makes its recognition straightforward), others, when the receiving language has a special location in the sentence dedicated to loans. The use of merely one of these criteria is usually not enough to ascertain the nature of a loan-word: an unmistakable identification relies on the use of more than one criteria and on extensive historiographical studies to identify the "path" a word had taken during its "movement" between languages.

1.1.4 BORROWABILITY

Two methods have been mainly used dealing with the study about borrowing of structural categories. The first is related to the frequency with which a category is borrowed, while the second suggest a relationship of implication between the borrowings of categories: one cannot be borrowed, if another is not (*hierarchical implicational relationship*). The hierarchical implicational relationship states that a category has different susceptibility to borrowing, and that the process of borrowing follows a predictable path, at least to some extent. So, the two methods can complete one another, and the borrowability would be a product of the semantic, pragmatic or morpho-syntactic characteristics of a category. The observations about loan-words and language contact made so far follow one of these two ways

of thinking, usually the first, or are based on casual observation or report counting of tokens of a corpus.

Matras (2007) reviewed a set of twenty-seven languages chosen among specific researches on syntactic borrowing, counting in how many languages a certain category has been borrowed and reshaped after a contact. On the borrowability of lexical items, the study found that nouns are more easily borrowable than verbs (*nouns>verbs*, hereinafter). The integration of verbs in a large number of languages, in fact, requires greater grammatical effort than the integration of nouns because of the greater verbal morpho-syntactic complexity. For this reason, languages tend to integrate morphologically simple form of the verb, such as the root or the infinitive. On the borrowability of lexical categories, the most common was found to be numerals, with a preference for "number over 10", and the hierarchy is composed by numbers in decreasing order. Other than numerals there are pronominal forms, conjunctions, particles/adverbs, and timing terms (with *days of the week>times of the day*). Words meaning "yes" seem to be the most commonly borrowed particles, although it is a consistently used common word (so it should better resist to be substituted). So, strictly from a lexical point of view, the hierarchy of the borrowing is: *noun/conjunctions> verbs> discourse markers> adjectives> interjections> adverbs> other particles> numerals> pronouns> derivational affixes> inflectional affixes* (Matras, 2007). This list is not a rule, but just a trend: many coincidental circumstances influence the possible order of the category of loans.

1.1.5 RELATIONSHIP BETWEEN CULTURE AND INFLUENCE ON BORROWING

At first, linguists hypothesised the choice between adoption and adaptation during the integration of loans was determined merely by linguistic factors: the

receiving culture would adopt when the linguistic structure of the donor language is sufficiently similar to allow it, otherwise it would adapt. Over the years, though, this hypothesis fell out of favour with the emergence of evidences that linguistic, social, and cultural factors were equally relevant in the integration process.

In section 1.1.1 the two main motivation for borrowing, *need* and *prestige*, were introduced. While the former does not entail preferential choices between adoption and adaptation, the latter, does. Prestige, in fact, determines what kind of word is borrowed and how they are integrated by the kind of relationship contacting cultures established during their history.

Hock (1986) analysed English loan-word acquired through the contact with three specific cultures: early Danes, French, and Native Americans. As mentioned before in the text, English borrowed from Danish a lot of basic vocabulary, even personal pronouns: "they" and "them" are borrowings of that period. At that time, Nordic languages and English where basically dialects of the same language, so there were no prestige connotation attributed to these loans. Later loan-words from French were taken into special consideration because of the greater importance that France had in that period, and which are related especially to the relevant areas of administration, of court, and of warfare. On the other hand, during the contact with Native Americans, the prestige of the English was bigger; the outcome was that English borrowed, out of *need*, only a few words, which were all related to place names or to Native Americans life, and which often acquired a negative connotation.

In his publication, Hock introduces an *ad hoc* terminology to define the relative social status of the participants in the linguistic contact: *adstratum, substratum*

and *superstratum*. Adstratum relationships, which are those between equals, are the more likely to lead to the borrowing of every kind of vocabulary. Where there is an unequal relationship, instead, there are limitation, and the loan tend to reflect the status of the donor language. When a language is a superstratum, loans come from prestigious fields, while if it is a substratum, the loans are limited to need borrowings and often have derogatory connotation.

In a substratum relationship, therefore, the borrowing culture tend to adapt, not worrying about a distortion of the original word. Instead, in the adstratum situation, the reverence toward a dominant culture determine a particular care, at the beginning of the process of borrowing, in maintaining the word as similar as possible to the original.

Once again, though, many different elements contribute to the choice of the way of integration, and prestige-based selection is just one of these socio-cultural factors. In fact, cultures speaking languages with similar linguistic structure can react differently to the contact with a superstratum.

Nowadays, Chinese resists strongly to borrow lexicon from English (a structurally different superstratum), while the Buddhism-driven contacts with Sanskrit (another structurally different superstratum) led to an intensive borrowing. The explanation could lay in a particular attitude some cultures show against borrowing, fearing that it would stray from native culture and traditions. This attitude is called "linguistic nationalism". In many cases, cultures display very inconsistent exhibitions of linguistic nationalism, like the Chinese attitude towards Sanskrit and English. Linguistic nationalism counterbalances foreign prestige, and its presence determine the absence of *prestige* borrowing.

1.2 Historical path of borrowing-themed researches

Researches on borrowing, started around the 1880s, and continued without a specific direction for more than 60 years. The first significant attempt, still considered one of the most substantial on this matter, was made by Haugen in his work "The analysis of linguistic borrowing" (1950). In the essay, the author tried to define the most important concepts on the study of borrowing.

1.2.1 Haugen's work

Haugen (1950) started his dissertation discussing the term "borrowing" and explaining that the most understandable term for the phenomenon was "mixture". However, some scholars did not agree with this term. Actually, "to mix" assumes that two elements, once put together, create a new entity and then they disappear. Instead, in borrowing phenomena, the introduction of linguistic elements of one language into another one results in an alteration of the latter, while the elements of the donor language maintains their essence intact. After the use of "mixture", other different terms were proposed such as "hybrid", "stealing", or "adoption". However, linguistics rejected all these new proposals and decided to adopt the term "borrowing" to describe this process. The reason for this choice is still unclear, but it is possible that it has been chosen because it was the most neuter term amongst the others.

The final definition of borrowing Haugen made was <*the attempted reproduction in one language of patterns previously found in another*>. It was obtained from three premises:

1) In communicative situations, every speaker reproduces patterns previously learned;

2) Among the linguistic patterns that the speaker had learnt, there could be those of a language different from his native's;

3) If he reproduced these second kind of patterns not in the context of the language whom they belong, he may be said to have borrowed them. The use of the term "reproduction" does not imply that there is a mechanical imitation but, as we will see, the result may differ consistently from the original.

There could be different types of borrowing: calling the original pattern the *model,* the loan can be an imitation of the model. A native speaker of the language of the model may recognize the loan as originating from its own language, or the loan may be unintelligible to him. In the former case, the loan would be called an *importation,* so that the borrowing speakers introduced the term without further modification. The latter case, instead, obscure to donor speakers, was introduced but was also subjected to modification, so it was *substituted.* Nowadays, linguists prefer to use *adoption* and *adaptation,* as cited previously. The two kinds of reproduction cannot be distinguished if the loan's pattern are not innovative for the borrowing language. But if these innovations are present, it is likely that a compromise between the two languages, in the fields of phonetics, of inflection, of word formation and of syntax takes place. These substitutions are always the result of a mental process, although this is rarely conscious. It has been used the term "process", because borrowing cannot be defined as a state.

The terminology of borrowing includes many terms, and the author illustrate them briefly. **Loanword** is the most generic term and it is usually limited to those

words where the phonetic shape is imported together with the meaning. Hybrid, or **loan-blends** is used to distinguish the words which have only a part of the original model, while the other is substituted by a native morpheme (called *morphemic substitution*). A common example is the word "monolingual" that has a Greek prefix and a Latin root. A **loan-translation**, or *calque*, or *loan-shifts*, is, instead, an entire compound that has been analyzed and then translated in his every part in the borrowing language. Closely related is the **semantic loan** i.e. the borrowing of just the meaning that is added to one already existing native word.

The simplest substitution is the phonological one. Usually, speakers are often unaware that they have changed the loan-word, and many times are sincerely surprised when the native speakers do not recognize "their" words. From studies on early age of children it is known that the brain settles itself to a set of sound after few months of life (Caselli, 1996). So, an adult speaker is trained to react to only certain features, and will struggle trying to recognize and reproduce sounds that are absent in his or her set. He can anyway try to import new sounds together with foreign words.

Words that are more distorted are presumably older, whereas the latest words introduced are more similar to the original. But this method is not always possible, especially when the word does not contain critical phonemes. Furthermore, the distortion depends also on the degree of bilingualism, not only on the historical period. In the development of a single word some assumptions can be made. At the beginning, a bilingual speaker introduces a foreign word pronouncing it as similar as he can to the model language. The word is modified if the speaker has the occasion to repeat it or other speakers start to use it. When monolingual speaker learn it, a substitution, partial or total, is made.

Following this reasoning, the author supposed the existence of certain stages that are not chronologically organized. A pre-bilingual period, when the loan is imported by a small group of bilinguals into a majority of monolingual and show an almost complete substitution. A period of adult bilingualism, when, thanks to the greater knowledge of the donor language, native speakers make a systematic substitution. And the last stage is childhood bilingualism, where the characteristic process is the phonemic importation, so completely new phonemes are introduced.

After the introduction of a loan, it must be incorporated into the borrowing grammar, and must be assigned to one of the various grammatical classes. This assignment does not always follow the same criteria, but may depend on the situation and on the need of the borrowing language. The loan is subjected to continuous modification from the model, being borrowed different times from different speakers, (process called *reborrowing)*. Moreover, speakers may be of different ages, or may use different dialects, and because of this further modification occurred.

Some kind of linguistic pattern are more likely to be borrowed than others. The Haugen's word list, from American Norwegian, states that over 75% of the loan are noun, followed by 18.4% of verbs, and a small percentage of adjectives (3.4%), adverbs and preposition (1.2%) and interjections (1.4%). In the list are not present neither articles nor pronouns, but this does not mean that they are not borrowed. It simply means that the percentage is too low, and it is unlikely that they would appear in many sets of loan.

A scale of adoptability can be set, and it seems correlated with the structural organization of the language. One the one hand, if lexicon can be easily modified

because a speaker learn new vocabulary throughout all his life; on the other hand, structural features are established at an early age, and are used and repeated in every communicative situation. Therefore, as habitual and subconscious features, they would be harder to change.

Haugen also considered the matter of loan identification from the lexicon of a language. It is not always possible to isolate a loan-word in every case. He described two different methods to establish the history of a word. The first one is the historical method: linguists track the path of every single word to determine their origins. The second method is the synchronicity one. It analyzes which words are perceived by native speakers as "foreign" because of certain alien characteristics. These characteristics are: orthography, pronunciation, spelling-pronunciation correspondence, accents, morphology, word-formation and meaning. However, these main characteristics are not sufficient to determine whether a word is a loan or not. To determine it, we need both methods: the historical and the synchronicity ones.

1.2.2 IMPORTANCE OF SOCIOLOGICAL FACTORS AND BORROWING IN CORE VOCABULARY

The research by Haugen was innovative so later studies started using it as a premise. A significant study is "Neighbors and lexical borrowings", by Scotton and Okeju (1973). It starts from Haugen's work and adds significant points to the discussion on how borrowing works.

It affirms that in the studies about lexical borrowing two unfortunate assumptions were made and the research tries to challenge them. The first assumption (pointed out by Haugen) lays in the theoretical model for defining the various kind of borrowing. Not only it analyzes the final product, the loan word

itself, but it also pays attention, to the socio-cultural setting in which the borrowing takes place. The second assumption is that lexical borrowing creates mainly items that are new to the borrowing culture, and the words that infringe on the already existing vocabulary are rarely mentioned.

With these assumptions linguists considered the subject of borrowing already solved. However, Scotton and Okeju use the data collected from an African language spoken in Uganda and Kenya to prove that the existing model was unbalanced and must be modified.

Researchers examined three main hypothesis:

1) An adequate model must take into consideration the subgroup of speakers involved in the contact and their sociological situation. Apart from the fact that the subgroup shares the knowledge of the language with the entire community, it must be considered as a single unit in term of linguistic performance. So both social and linguistic patterns must be considered.

2) The authors supposed that lexical borrowing within core vocabulary is also very common, postulating a sufficient period of intensive contact. The items of the core vocabulary that are borrowed are the most peripheral, but the data show an extensive borrowing between elements such as function words, common use short phrases (e.g. "I don't know"), dates and times, and greetings. Every one of these items is an element that is already present and widely and often used in the borrowing language. It means that it is an active lexical item.

3) The last one is a general hypothesis about the social status of the speakers and their borrowing pattern. The most part of borrowings for new cultural items are introduced by speakers with a high educational level or travelers, who both

have great opportunity to borrow words thanks to their wider linguistic horizon. The hypothesis is that borrowings for new items depends heavily on the individual. Instead, borrowing in core vocabulary can occur with any speaker, regardless of his social status. So, in this case, borrowing is a matter of general diffusion and pervasive contact between speakers.

Although the hypothesis are ambitious, the data supports the possibility of a correlation between types of borrowing and different magnitude of social contact.

The authors chose to present the case of a language spoken in Uganda and Kenya called Ateso, and its loan-words. This choice was motivated by several peculiar characteristics of this language community. First, the speakers of Ateso live in separated areas and in each one of them they represent a minority. The authors supposed that they should be "enthusiastic" borrowers. Second, in recorded history, speakers of Ateso (called Iteso) did not exercise any influence over the surrounding cultures. Third, the neighboring languages are genetically distant from Ateso.

The main donor languages to Ateso are the following: Dhopadhola is the most widespread language in the rural areas near Iteso communities, and is very common for Iteso to marry Padhola women, learning their language and using it at home. It rarely happens the opposite situation, maybe because Ateso is considered more difficult than Dhopadhola. What's more, Iteso community considered themselves to be in a lower social level compared to other communities. As a consequence, they seem to prefer learning foreign language rather than teach their own. The second language that influenced profoundly Ateso is Luganda, which was the dominant culture all over the area. That was because this language was used

as lingua franca in that area, being the language chosen by the British for administration and education, and now is spoken, even just a little, by every subject of the study. Another source of loan-word is Swahili, which is also the language of institutions and the main language throughout Africa: every traveler has to know it to some degree. Instead, English is not really well known by a large percentage of the Uganda population even if it should be the official language. Although, the prestige of English is really high, and it is also the vehicle through which the new western technology and innovation are introduced into Uganda and Kenya.

The data for the study by Scotton and Okeju (1973) were collected in two different areas, both in Kenya and Uganda. The researchers interviewed subjects both on a list of basic vocabulary composed by 100 items and on free speech about everyday activities. The research subjects came from two different communities, Amukura and Tororo, which were slightly different in matter of linguistic influence and also general cultural level. For the Amukura community, the main influences came from Swahili and English, and the average level of instruction was high, while the Tororo community was more in contact with the Bantu languages (Dhopadhola and Luganda). Even if the study aimed to focus on macro-group differences, the kind of loans seems to change depending on the community.

Analyzing the quantity of loans in the two groups, researchers started to notice that:

1) From the comparison between the data collected and the "standard dialect", borrowing is more present in the core dialect. These borrowings are really different from each other, depending on the neighbours cultures.

2) In both groups, loans that replace native terms are not very frequent. However, in this case, verb and noun loans have the same frequency.

3) There are many borrowings between functional morphemes, but they occur mostly in the Amukura group and they come from Swahili, which have a minor influence around Tororo area. The hypothesis used to explain this fact is that Swahili is very common in Amukura area, and being also a lingua franca in the majority of Africa, the Amukura speakers that use Swahili loans are sure to be understood by a lot of people. Instead, Tororo speakers do not have the strong influence of Swahili, so they do not borrow core vocabulary from it. The other languages from where they could borrow this kind of lexicon are not so widespread, and using them would increase the possibility of incomprehension with people outside their community. What's more, Tororo speakers do not have a dominating foreign culture, but multiple different influences.

4) Code switching amongst Tororo speakers is possible only where the Padhola culture is really strong, i.e. in micro groups that are often isolated from the larger community.

Then, the authors provide a detailed description of the loans used in the sample. Obviously, the name that describes new concepts for the Iteso are the most common, followed by a small group of nouns that already existed in Ateso, but that have an "old" meaning: i.e. "e-biasara", from Swahili "business", is used instead of "a-gwelanar" that convey more the meaning "trade". Then, the strictly replacement for nouns describing already existing concept are a few, and the borrowing can have various motivation, and sometimes the ex Ateso word is reintroduced. Last, the borrowing in the core vocabulary fall into four groups. The first is number and

dates: in Amukura the borrowing of numbers from Swahili is almost a rule, for every speaker. English is not widely used in this field, but is common to borrow from it to express dates, because in many East African languages the way to express months is troublesome, and they prefer switching to English. The second kind is short self-contained phrases, and the third is code-switching for long phrases or whole sentences, while the fourth is most common in subjects that were not so strong in Ateso. The last is self-standing morphemes, which are more common between Amukura speakers who borrow them from Swahili.

Concluding, Scotton and Okeju argued that the product of borrowing, the actual loan, can be analyzed only after that the entire process has been already considered: the nature and the extent of the linguistic and cultural contact and the structure of the society. The evidence from Ateso show that in the process of borrowing the socio-cultural context seems more important than the structures involved. Furthermore, borrowing in the core vocabulary needs to be taken more into consideration, because it is a widespread phenomenon, even if in a modest degree. Finally, the last hypothesis is that the extended cultural contact influences profoundly the type of items that are borrowed: the lexicon for new items is borrowed by individual from a higher socio-economical group, while the core vocabulary needs only bilingual speakers belonging to any social group.

1.2.3 GAIN MOTIVATION

In 1994 McMahon introduced another concept, originating from Haugen's definition. She wanted to analyse the motivation for borrowing and she supported the theory that the first factor that regulate the phenomenon is ***gain***. If a language goes through all the processes needed to transfer and integrate a foreign item into

his lexicon, it must benefit in some way from it. There are two different types of gain. It may be social because often loan-words are borrowed from prestigious groups. The gain can also be more linguistic. In this case, there can be two possibilities. The first one is that the speakers find a replacement for items that in their language are becoming obsolete or lost, and the other possibility is to find a new concept together with his original label, without bother to find an additional word for it.

This choice is not an "all-or-nothing" one, but can change over the circumstance. Actually, it might happen that a loan-word is introduced as an adoption and then it is subjected to some adaptation maybe from non-bilingual speakers. In general, some languages tend to be predominantly adopters, while others prefer to adapt, but it does not seem that these tendencies are predictable. Although, when linguistic nationalism is present (see Section 1.1.5), the culture avoids to borrow because it is afraid to corrupt itself. Also, the degree of adaptation depends on the quantity of loan-words from the same source that are already present in the language, and the degree of bilingualism of the speakers: if the speakers are familiar with the donor language, they are less likely to adapt the words they borrow from it.

Guilbert (1975) suggests that there are different stages for adoption. At the beginning, the loan is a "xénismes". It is treated as a foreign word and is italicized in the texts, or enclosed in quotes, but it is generally translated. A second phase may be the "pérégrinism", that is a pure adoption: the loan-word is used more widely, but is still perceived as foreign. In the third stage, the word can be rejected because it is too different from the borrowing language, and replaced by a native word or roundabouts.

1.3 FIELD WORKS

Most of the studies on borrowing focus on particular aspects of the process. It, could be the question of adoption versus adaptation (Laeufer, 2010), or the semantic fields of the borrowed lexicon (Cannon, 1988), or historical or geographic situations and their correlation to borrowing (Coronel-Molina & Rodriguez-Mondonedo, 2011; Terrill, 2011) or even systematic borrowing in order to create new lexical fields (Pellin, 2007).

In this dissertation it has been chosen to present in detail, three of these studies which deal with topics that can be useful in the following chapters. These are sociolinguistic topics and they concern the affective motivation for borrowing and the different attitudes towards borrowing. The first issue was addressed by Babel (2016).

1.3.1 AFFECTIVE REASONS

The article (Babel, 2016) aims to describe the use of aspirates and ejectives in a variety of Spanish in contact with Quechua, and to demonstrate that they are associated with local identity and affective stances. It has been already pointed out that social factors play an important role in language contact situations because they determine what kind of elements are borrowed into a language. Both aspirates and ejectives are easy to control and apply into Spanish phonological system for Quechua bilingual speakers and are very salient as phonological features. They seem to be under the conscious control of the speakers who should manage to avoid them where Spanish does not require them even if they are often used in specific social contexts.

The author proposes that the motivation to this behavior may lay on the social importance of these sounds. Usually, the studies in phonological borrowing are connected to loan adaptation and orthography factors, but this kind of explanation is not sufficient to clarify the highlighted phenomenon. Because of the prolonged contact and the widespread bilingualism, followed by a massive amount of lexical borrowing, the bilingual speakers of Quechua and Spanish are perfectly able nowadays to pronounce the right consonants. So, a social motivation is more plausible.

The data for the study were collected in a town in the Santa Cruz department in Bolivia, which is surrounded by a Quechua-bilingual city and a Spanish-monolingual one and the valley is dominated by a strong bilingualism. The variety of Quechua spoken in Bolivia has a three-way phonological contrast between aspirated, ejective and unmarked voiced stops, while Spanish has only a contrast between voiced and voiceless stops. Data consisted in field notes, recording of natural interactions and material artifacts gathered in 50 months of full immersion in the community. The way loan-words are adapted into the native phonological system is believed to depend either from universal acoustic factors or phonological knowledge of bilingual speakers' knowledge. The speakers use these sounds spontaneously in natural speech, and in 480 minutes of recording were found sixty-nine occurrences of aspirates or ejectives (from now on, *laryngealized* consonants).

The words containing this kind of consonants can be grouped around certain kind of topics. The most common occur when speaking about people physical characteristics or body parts, followed by plants and animals' names borrowed from Quechua. Then, these loan-words are used to speak about certain kind of

works, as women's, manual labor, etc. Also, they are used for onomatopoeia and insults. So, they tend to be used most of the times in intimate and informal speech, or anyway in contexts marked with affect, or in situations where speakers want to evoke these contexts.

The author quotes some examples in which native speakers use this kind of borrowing while speaking Bolivian Spanish, among which: onomatopoeias, expressive descriptions, threats, and in a case where the laryngealized consonant was used in substitution of the Spanish sibilant. In this latter case, the speaker tried to convey a sentiment of disapproval towards the person whose he was speaking about. In the Example (1), quoted from the text, it is possible to notice that the subject do not use code-switching or other borrowed words, and that his Spanish is always correct. Only the threat word is a loan and it is the word conveying the meaning and the expressivity of the sentence.

Example (1): Insults and threats *(t'unar)*

1 MT: Es que yo no quiero salir con ni uno! Vergonzoso pues.
2 MR: (laughs)
3 MT: Es que esta otra no me deja pues, ya va ya a querer pegar, a la una,
*a la otra. Peor me va a hacer [.], me va a **t'unar** a ver.*

1 MT: It's that I don't want to go out with anyone at all! I'm shy.
2 MR: (laughs)
3 MT: It's that she doesn't let me, she goes to try to hit them, this one,
*that one. She'll do worse to me, she'll **break me into bits**, you'll see.*

The loans marked by aspirates and ejectives are present mostly in angry or emotional speech, and are not used in unplanned and natural speech contexts.

They are also used in *performative* contexts, particularly in satirical or comic performances.

Many of the subjects described Quechua as "more affectionate" than Spanish, and it is perceived more connected with the land, the rural community and that specific area. In commercials or in others media, loan-words are consistently used to "perform local identity". The types of words that contain the borrowed phonology are intimate for the bilingual speakers, who, even if they can use the correct Spanish sounds when the word is neuter, feel the necessity of turning to familiar sounds when the subject is perceived as personal and engaging.

1.3.2 DIFFERENT ATTITUDE TOWARDS BORROWING

Two recent researches dealt with the topic of different attitude of speakers toward borrowing. Ncube (2005) reported the feedback of speakers of Ndebele, one of the languages spoken in Zimbabwe, after the introduction of loans into a new dictionary, *Isichazamazwi SesiNdebele (ISN).*

To understand this topic, it is necessary to start from a socio-historical description of the Ndebele community which is formed by a mixture of several tribal groups set in a hierarchical scale. The language was linked to Zulu, but every tribe continued to speak its native language, although they learnt to speak Ndebele. As a consequence, Ndebele developed in a multilingual environment, surrounded by various influences and mutual borrowing was inevitable. The primary source of loan-words is Zulu and English (mainly through Zulu or Afrikaans). Most of these loans represent concepts that were absent in the language, because unknown or inexpressible, and now have been naturalized into the lexicon of Ndebele.

The editors of ISN compiled a list of high-frequency words and, introduced the possibility of the inclusion of the loan-words in the dictionary. The possible implications were two: the loans portrayed a language in development, or Ndebele has become corrupted by the multiple contacts with foreign entities. The introduction of the loan-words in the dictionary seemed to interest native speakers who are traditionally more concerned about the written form than the spoken one. A non-native speaker of Ndebele is not judged for his pronunciation or his grammatical mistakes while he speaks, but he is demanded to write correctly at every level.

After the publication, ISN editors were criticized by the population for introducing loans into the dictionary. The words were perceived as a damage to the language because the lexicographic activities was thought to have the duty to promote, but at the same time to preserve, the indigenous language. But practically it is impossible to define a moment when Ndebele was an isolated language, without loans.

The general attitude probably would tend to exclude the most recent loans, which already have got an equivalent in the local lexicon, and so are unnecessary. Often the equivalents did not even appear in a frequency-list of everyday actively used words, but this objection was not taken into consideration by the native speakers, who were worried about the corruption loans would bring into the language. Historically Ndebele was the language of the higher class of the community, and it was elected as lingua franca during the colonial period. Nowadays borrowing is perceived as introduction of "low status" words into a high language, and that would lower the prestige of the language.

But after independence some instability are emerged and created some contradictions between language use and attitude. The age of the speaker is another salient factor to determine the attitude: younger subjects seem more open towards the loans than older speakers. Younger speakers, however, consider the dictionary useful more for grammar than for lexicon.

Also Urdu older speakers are more concerned than younger ones about borrowing. Sipra (2013) reports the situation of Urdu language in Pakistan, where it shares the position of "language of power" with English.

Urdu is an Indo-European language that historically went under many influences such as Turkish, Arabic, Hindi and Sanskrit languages. But the most important influence was Persian. Urdu is old a few hundred years and in the past was considered only a variant of Hindi, until the 18th century, when it was recognized as an independent language. After the British colonization, Urdu was not influenced so much, because it was not the official language, but just a language spoken in a limited territory by a minority (Muslims). As a consequence, it did not have to face directly English. But, nowadays, Urdu has to face English as international language because it became the official language of Pakistan after the independence.

People in Pakistan have different opinions about borrowing. Many of them consider it a simple effect of globalization and accept it easily. Other people are more worried about the replacement of their mother tongue with some kind of a mixed language. In the latter category there are mostly older people, while younger are used to code switching and mixing. This happens because Urdu is particularly

fitting for adoption borrowing thanks to its rich phonetic repertoire and so it is relatively easy to integrate native and borrowing words while speaking.

Many factors contribute towards borrowing in Pakistan such as government policies, media, and social consciousness. In fact, English has become the language of education and of mass media and it is associated with a higher socio-economic status.

These studies portrait a situation that is relatively common. It seems that nowadays languages cannot avoid borrowing because language contact situation has become the norm of most societies. Although, it is still perceived with a negative connotation by large part of the population.

1.3.3 PECULIARITY OF JAPANESE ATTITUDE

It seems, though, that in some societies borrowing is perceived as an interesting and fun phenomenon by most of the population and the Japanese society is one of them (Smith, 1974).

Although Japanese and English have been influencing each other since the 19th century, after the American occupation from the end of World War II, new evidences of this influence were found in Japanese reported also by American journals. The most resounding borrowing was the expression "*doru shokku*", the loan of the American "dollar shock". American journalists who were living in Japan started to use in that period some Japanese words in their articles, to give them some authenticity and also a touch of humor starting a period of active exchange between the two languages.

It has been proposed a distinction between kinds of language-contact in Japan. *Japanese-English* is simply the English Japanese spoken at various level of competence. Then, Japanese is extended by ordinary loans and *Ingrish*. *Ingrish* is a special kind of borrowing, in which English items are combined in a foreign way, so to create new terms that in the original language (English, in this case) do not exist. Japanese-English is always funny to hear for tourists or foreign people who comes to Japan to work, because the general level of proficiency in English seems to be really low. This is due to the fact that English is extremely difficult for Japanese speakers even if they imported freely and frequently from English lexicon, as well as from other language.

The majority of the words come from fields of ideas, technology and food ("erebeetaa" as "elevator", for example). *Ingrish* is more Japanese than a strictly speaking loan, and it express meanings for which English already possesses a word. The components with which the words are formed are English in origin, but the combination is purely Japanese.

No educated Japanese has the possibility to escape the influence of English: at least three years of formal education are compulsory, so most students have at least some degree of familiarity, which permits them to use English lexicon in a playful ways. *Ingrish* also allows them not to observe the "difficult" English rules, and to feel more comfortable. Often the loan are sentimentally characterized, with either hostility or humor but, in general, there is no prejudice against borrowing.

Ingrish terms fall into a limited number of semantic categories, primarily the description of events, products, trends and phenomena that are foreign or perceived as such. The major category is food, probably because of the interest of

Japanese in food and diet. Products are the second one, as modernization and the West are strictly connected, followed by mass-media terms, life styles and people.

Therefore, the entertaining aspects of this phenomenon are part of the motivation for the fact that it is so popular for Japanese people. In addition, since it started as a mass phenomenon more than seventy years ago, now all population accepts it without any concern. This attitude of Japanese people will be recalled in the next chapters.

CHAPTER 2
BORROWING
IN SIGN LANGUAGES

To understand the process of borrowing in sign languages it is necessary to specify that sign languages are, except for some exceptions which would be dealt in the following parts (see Section 2.2), in a situation of submission to the oral languages in every society. Most sign languages are young, meaning that they were codified and unified during the last two centuries, but also that they were not considered proper languages until the 60s and 70s of the 20th century. As a consequence, the majority of signers have increased the awareness toward their language in recent times.

Many hearing people have some misconceptions about sign language, contributing to lower its language status. One of this misconceptions is to consider sign language as an universal language, and thus considering it as the same for everyone in the world. So, apart from the consideration of a general ignorance about this topic, it is worth considering that, in people's opinion, sign languages are not considered equal to oral languages. In fact, no one would realistically contemplate the chance to have just one oral language for everybody. One of the consequences, apart from a small diffusion, lack of public services, schools and information in sign language, the isolation of the deaf community, is, linguistically, that the prestige of the language, in relation to its closest peer, is really low (see Section

1.1.1). This social situation pushes towards a widespread borrowing by sign languages.

In chapter 1 it was pointed out that another motivation for borrowing is the intense contact between languages. The great majority of signers know to some extent a written and/or a spoken language to interact with hearing people. Due to the lack of shared writing systems of sign language, deaf people have to use another language if they want to write. Because they are bilinguals and in constant contact with spoken language in their everyday life, deaf people are also submitted to a strong cultural pressure, leading to heavy borrowing (Thomason and Kaufmann, 1988).

The first part of this chapter will deal with the process of creation of new sign and how contact situation between sign and oral language is a part of this process. Then, it will analyse the consequences of contact, code mixing and borrowing. Lastly, as far as borrowing is concerned, the borrowing from the writing system i.e. fingerspelling and ideogram-based borrowings, also known as ***character signs*** will be discussed.

2.1 BIRTH AND DEVELOPMENT OF SIGN LANGUAGES

The origin of signs is difficult to determine because of the lack of written or recorded documents. Girardi (2000) claims that signs may be divided into two groups: *quotation signs*, codified in rigid form and present in dictionaries, and *classifiers*, iconic signs that vary depending on the object they represent. The majority of signs is born from classifiers, but other origins are possible too. In the creation of new signs there are five phases: 1) outer influence or observation of the

reality, 2) sight perception, 3) linguistic knowledge assets, 4) creation of temporary signs, and 5) codification of a conventional sign or desertion. A sign can be abandoned if there are other choices. This may happen because the sign is difficult to articulate, or it contains mistakes or simply if it is not in fashion any more.

2.1.1 CREATION OF NEW SIGNS IN ITALIAN SIGN LANGUAGE

In Italy, researches on the origin and evolution of Italian Sign Language (LIS) began with Radutsky (1990) who was inspired by the studies on ASL and drew an historical path from the earliest videos of 1950s and 60s till the present ones. She identified some phonological processes involved in the evolution of the language. Because of the absence of a written form, LIS is really fast in modifying itself. In addition to modification of existing signs, new signs substitute old ones if they represent objects.

Bertone (2005) describes that new signs can be created in three ways: classifiers, through the influence of Italian, and borrowings. Classifier signs point out entities that are different from others by physical characteristics and so are deeply iconic. They are divided into five typology: form, grabbing, movement, action and behaviour. The founding system of classifiers is the creation of metonymies, through processes of cause-effect or concrete-abstract, or synecdoches, with signs indicating a part referring to the whole. Other signs are created interpreting and making association of meanings of Italian words: the sign for "diritto" (straight) is visually signed as "the opposite of croocked", even when it is referring to the juridical meaning (in Italian "diritto" has actually the meaning of "straight" and "law"). Words belonging to the same semantic group can be gathered and signed in the same way differentiating them by mouthing: "electricity", "computer" and

"electrical shock" are signed the same way. The last way to create new signs is borrowing both from oral and sign language. The main form of borrowing from oral languages is fingerspelling.

Fingerspelling creates many words in LIS. Fingerspelled words can be formed in different ways:1) they may be complete, so the word is produced signing every letter; 2) initializing, when the first letter is incorporated into a previously existent sign; 3) using a middle letter (as initialized signs but instead of the first letter, it is usually signs a not common word, for example X for TAXI); and 4) lexicalizing, when a complete fingerspelled word is modified to become a quotation sign where some original letters are recognizable as in the sign LIS.

Strictly speaking, borrowing for sign language can be realized from other sign languages or from the gestures typical of a culture. The most common borrowing from other sign languages is for names of countries: it is usual to use the local sign for the sign-names of a country. Also other words are borrowed thanks to technology that gave the chance for deaf people to communicate remotely. For example, the ASL sign for "feedback" has entered LIS vocabulary.

2.1.2 THE CASE OF NICARAGUAN SIGN LANGUAGE: FROM GESTURE TO SIGN

In every sign language there are parts that can be familiar to a watcher even if he does not know the language: nods, facial expressions and even local hand gestures. Some of the signs probably look alike the gestures hearing people do when they talk, with the difference that signs are linguistic units and gesture are not. Although, signs derive from gestures, especially for basic vocabulary or common expressions. The process needs several steps, and the study on

Nicaraguan Sign Language (NSL) by Senghas and Coppola (2010) suggests that the agents of the steps are native speaker children.

NSL fits studies on development of new languages. It is a language of only thirty years old people, so it is possible to have a direct feedback of the people involved into the creation. Up to the 70s, deaf Nicaraguans had few opportunities to come in contact with each other: they stayed at home and met with members of the family and neighbours. In this situation, deaf children often develop homesigns to communicate with others. Homesigns are a made-up set of gestures that are used with members of the family. If there is no sign language input, users of homesigns develop a more complex system of signing. But that may be ascribed as homesigns anyway because of the maintenance of basic characteristic: limited vocabulary, ability to discuss only of present events or objects, and consistent word order. In 1977, a centre for special education was opened and more than fifty students enrolled within the first year. Although teaching of Spanish through lip-reading had little success, the proximity with other deaf people pushed children to use gestures to communicate with each other, and these interactions were the starting point of the NSL. New students learnt to sign from older ones and every one of them remained in contact, creating social and athletic programs, spending holidays together, marrying to each other. Now the community is composed by over than a thousand people. The richest and most fluent signers are the younger ones, who could exploit the experiences of older signers and benefit of the finished process of language creation.

The study by Senghas and Coppola selected three groups: people that entered the school in the late 70s and early 80s and now are adults; those who arrived in the school in the 80s and now are adolescents or young adults; and those who

arrived in the 90s who are now children. The production of a particular sign (the pointing) was analysed in the three groups and also in a group of homesigners who never entered the school. The pointing was chosen because it is a common gesture used by all people, accompanying speech, but is also present in most sign languages. Both hearing and deaf children, produce pointing at an early age, sometimes before their first words. Specifically in sign language, pointing movement accomplish various tasks: it can be combined with a noun to indicate that a referent is a specific one, already mentioned, or a new one. ASL, for example, can show the subject or object of a verb, if it is executed with the index finger pointing, or a possession, if executed with an open palm. But above all, pointing is necessary to use the three-dimensional space: pointing, the signer incorporate a location with a specific referent, and then use the location to refer to it, linking a character with a role, or objects with their traits, or establishing a relationship between different characters.

In homesigns, the presence of pointing was attested in many countries (Goldin-Meadow, 2003). It was used to refer to objects and locations, or even to non-present people and their role in simple events. Analysing the production of every group, Senghas and Coppola (2010) divided the points into two categories: location pointing and object/person pointing. The locatives were often used by all groups, and they were always accompanied by an eye gaze. In the nominal use, there was no evidence of eye gaze and the movement was smaller and quicker than the locative pointing. Both uses were produced with different frequencies, and the frequency was the main difference between the groups. Locative use was constant in every group, while nominal use increased with NSL complexity: homesigners produced very little of nominal pointing, and the third group, children's one,

produced it more than the locative one. This difference of use suggested that nominal points were used in different way by expert signers. It was analysed how many times the nominal points were combined with another sign to form a phrase: it appeared that, when combined with a verb, the syntactic function change to become a pronoun. This use also increases with NSL development.

So, the points started as a gesture with concrete meaning to become a symbolic nominal and pronominal function, entering a linguistic system as part of the grammar, more categorical and language-like, and less context-bound items. From the history of NSL, it is easy to deduce that the actors of this changes were the children, <*learning and relearning the language*> (Senghas and Coppola, 2010) and transforming simple gestures in a linguistic element.

2.1.3 SUMMARY

In the process of creation of new signs that may happen during the birth of a sign language, as the Nicaragua example, or during the life of the language, the majority of the changes are internally motivated by the speakers or signers themselves. Although, the influence of the hearing culture, and spoken/written language, as it would be mentioned in the next paragraph, is really strong and plays an important role in the process of creation. The outcome of this contact can be summarized as follow:

- fingerspelling, and fingerspelled words;

- initialization and use of middle letter;

- extension of the meaning through homophony or semantic groups;

- borrowing from lexicon and borrowing from the gestures.

Character signs are believed, by the author of this dissertation, to be a middle ground between fingerspelling and borrowing of lexicon.

In the next section the contact situation between deaf and hearing language and culture will be analysed.

2.2 CONTACT

Language contact in the Deaf world has not been taken up much by researchers for several reasons, mostly political ones. Ann (2001) states that in the case of deaf people, it does not exist a territorial unilingualism, because there is no community of native signers who live isolated from hearing people. The closest situation may be a community where everybody knows a natural sign language, but it has been attested in just three cases in the literature.

The first community was in Martha's Vineyard, an island in Massachusetts, where in a period of 250 years, until the 1950s, one person out of 155 was born deaf. Because of this high percentage of deaf people, also hearing people learnt and used sign language erasing the difference between hearing and deaf. There were reported cases of pure bilingualism in which hearing people signed even when no deaf person was present (Groce, 1985). Another similar case was reported by Johnson (1994), describing a Mayan village in Mexico, where 13 out of 400 inhabitants were deaf. All the adults of the village could sign and they learnt it by interaction with the deaf people, who could communicate only signing, resulting in a nearly complete integration. Contrary to modern society situation, this kind of integration makes social and economic benefits more accessible to deaf people, who do not perceive the need of creating a separate ethnic group. A last case of

harmonious relation between hearing and deaf people was found in Bali by Branson et al. (1996) in a village called "Deaf village". Even if the deaf were only 43 in a village of 2.000 people, their role in the village life was taken for granted by all the population. They had same rights and obligation of hearing people and could fully participate in the economic, ritual and political life because everybody could sign although with different levels of fluency.

In the rest of the world, bilingualism of deaf people does not resemble these three cases. Society is governed by hearing people because they are the great majority of the population ensuring that sign languages would come in contact with and would be profoundly influenced by spoken languages. Hearing people learning sign language are professional (interpreters or teachers) or deaf people family members. Bilingualism of deaf people is not a *balanced* one. Balanced bilingualism is a situation of equal comfort in using both languages, but most deaf people are not comfortable speaking an oral language. It exists a great diversity of individual experiences but the most common case of deaf bilingual is a person that uses a sign language and knows at a medium level his community spoken language. The not-balanced bilingualism produces interference, which among oral language is common as "foreign accent", or "deaf accent". In contact between sign languages, it happens that some native phonological characteristics are transferred to the second language, such as hand configuration or orientation. This is not possible for bilinguals in a sign and a spoken language but it is probable that they transfer morpho-syntactic features, or, mostly, lexical items.

Between the two kinds of contacts, the one that captured more attention by the researchers was the contact between a sign and a spoken language (Ann, 2001). Studies on contact focused mostly on the influence of the spoken language on the

Figure 2.1: ASL's #NO   Figure 2.2: ASL's #DO

sign one. In fact, the outcomes of this contact situation are not analogous to the ones of contact between spoken languages. The concept of borrowing is considered different. Lucas and Valli (1992) argued that fingerspelled loan signs are not borrowed from English, but rather from <the orthographic system used to represent English>.

As spoken languages adapt the loans into their linguistic systems using the aforementioned strategies, sign languages uses fingerspelling to integrate the loans into its system. At first they adopt the word, then it is changed over time (for an example, see the sign #NO[3] in American Sign Language, Figure 2.1). Another example of adapted loan in sign language are initialized signs that created using the configuration of the first letter of the correspondent spoken words. A kind of borrowing from spoken language is also mouthing i.e. the silent spelling of the corresponding word while signing. Some mouth configurations are independent

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[3] Sign language words are indicated with the words written in capital letters. If preceded by the hashtag, the word is fingerspelled.

from the spoken language but the contact lead to a frequent use of mouthing of the entire word or just the first syllables while signing.

2.2.1 CONTACT BETWEEN JAPANESE AND JSL AND CHARACTER SIGNS

Traditionally, Japanese Sign Language (JSL) was born in 1868, year of the establishment of the first school for the deaf in Kyoto, and now it is considered a stable natural language (Lucas, 2001). During its development, JSL borrowed freely from Japanese, the closest major language. This contact, regulated by the same force of the other sign language contact situations, was also more intense because of the geographical and the political context of the period. Apart from being an island, Japan in those years was forced by the US to open to foreign commerce. In fact, up to the middle of 19th century, Japan followed a strict policy of isolationism, and after the forcing, its attitude towards foreigners was unfriendly. Also for these reasons, Japanese deaf people in the period of "birth" of their language, did not have any other influences on their language except Japanese's.

Character signs are not typical of JSL and they are attested in at least four sign languages belonging to culture using ideograms in the writing system. Though, in Japan, there is a combination of a tight contact and a pervasive nationalism in the past, and an opposite attitude of openness towards other culture now. As a result of this combination, borrowing from Japanese is considered a valid and positive choice to get new lexicon. Herlofsky (2011) defines three kind of transfers from spoken/written Japanese: the first kind of transfer, without meaning, is of some shapes of the fingerspelling system, which imitates the hiragana or katakana syllabaries (in fact, not every shape of the 48 basic characters of the syllable are easily transformed in handshapes). Another transfer is of meaning alone, by loan

translation: for example, "hoomu-herupaa", a borrowing from English "home-helper", is signed in JSL as HOME+HELPER. The last kind is a form-meaning unit, as character signs, initialized signs, borrowing of gesture from hearing culture or borrowing from another sign language.

Character signs are created imitating the shapes of ideograms or part of them. As for other kind of loans, character signs may differ depending of the sign language, even when they are obtained from the same ideogram. Because the fact they are iconic, character signs seems to have structural properties different from non-iconic sign. Ann (1998) noticed that character signs can have handshapes that are not present in their own sign language set, or can have different combination of handshapes. The point of contact of some two-handed character signs also is unattested in other signs. Moreover, they must be signed in the same way regardless the fact that the signer is right-handed or left-handed, while every other sign can be specular, meaning the same thing if signed with the right hand dominant or the left hand dominant. In fact handedness is not usually contrastive in sign languages. This topic will be examined in depth in Chapter 3.

2.2.2 Positive consequences of contact: increase of proficiency in oral languages

An interesting outcome of the contact between sign and oral languages is code-switching and mixing produced by the visual modality and the auditory one. In fact, a consequence of sign and spoken language contact is *cross-modal bilingualism.* Cross-modal bilingualism is a term used to refer to bilingualism involving two languages using different modalities. To deal with this kind of bilingualism, Menéndez (2009) introduces Cummins' Linguistic Interdependence Theory that

was initially developed for minority languages towards English. It states that the skills developed in the L1/minority language would promote proficiency in a L2, arguing that linguistic-academic skills are similar across languages, so they can be transferred from L1 to L2. Contrasting with this theory, Mayer and Wells (1996) proposed the *double discontinuity hypothesis* for sign language that states that due to the different modalities there is no chance that the transfer from sign language to written language can happen. The motivation is that the transfer may follow only two paths: 1) oral L1- written L1- written L2 or 2) oral L1- oral L2- written L2. Sign languages do not have a written form, so path 1) is not possible, and profoundly deaf people do not have a sufficiently high level of oral language to transfer trough the 2).

Mayer's theory has been criticized for lack of data support, but transfer from sign language to written language remained unexplored until Plaza-Pust (2008) proved that lexical borrowing, occurring at certain phases of development, decrease as learners increase the proficiency in L2. She analysed the production of bilingual deaf children learning German Sign Language (DGS, "Deutsche Gebärdensprache") and written German who attended the Berlin bilingual education programme. Studies on bilingual signers provided interesting evidences of the cross-modal contact phenomenon and the resulting mode-mixing, possible only when a sign and a spoken language are in contact. The evidences on this phenomenon suggest that individual signers use language mixing as an additional aid in certain situation such as in request of clarification, or signal of distance to the interlocutor.

As far as bilingual acquisition is concerned, it is assumed that both languages develop separately and independently, but during the development exists an interaction between them. The presence of mixing reveals two facts. First, the

combinations are grammatically correct and so bilinguals has already settled innate grammar principles (Universal Grammar theory). Second, since in pure bilinguals mixing changes over time, it was possible to decide that it was a characteristic of a certain development periods especially the reorganization phase. Plaza-Pust's study aims to check on two different assumption: either the difference of modality separate strictly the two languages and no mixing is made, or, if the learner unconsciously knows that at an abstract level the languages are equivalent, there is a mixing during development. The experiment was conducted during three years and the production of narrative, signed or written, of nine children was analysed. Data on DSG revealed that grammar production was of increasing complexity and there were present patterns that were possible borrowing from German. There is an individual variation regarding the borrowings, structural or lexical. But the common pattern is that mixing decreases over time, while the basic structures in both languages are settling. After the structures are established, the mixing is reduced to idiomatic expressions.

Cross-language bilingualism is a natural phenomenon where code-switching and code-mixing alternate depending on the situation the speakers is in. Menéndez (2009) specifies that mixing is not a voluntary choice, but correspond to a <*pooling of resources*> that allows bilingual people to fill in the gaps of the target language using their developed sign language structures. So, the mixing is a tool that aid development. He analysed the written production in English of a group of deaf students of a bilingual school in Barcelona. The students were asked to write three common stories in the three languages, and their production was analysed looking for proof of language contact. The author proposes several categories of possible language contact: un-inflexion of the verb — typical of Catalan Sign Language (LSC,

Llengua de Signes Catalana) — dropping of the copula, noun morphology (absence of plural or gender), determiner, proposition and pronoun ellipsis, adjective location (after the noun in LSC), word order (flexible SOV in LSC, rigid SVO in English), loan translation. All presumed evidence of contact but SOV word order were found in the corpus. So, the study showed evidence of transfer, from LSC to written English, at a lexical, morphology and semantic level. Results supported Cummins' Theory applicability for sign languages and spoken/written language contact.

2.2.3 CODE/MODE-MIXING BY ASL-ENGLISH BILINGUALS

In a study about bilingualism and code-mixing by Berent (2004) the target is ASL-English bilingualism. The structure of the two languages are different: in ASL, word order is relatively free and is a pro-drop language, but, morphologically, verb structure is quite complex. Although, there is no conjugation of verbs: tense is not marked, and the collocation in time is defined by use of adverbs. In Sign Language-Spoken Language bilingual acquisition, deaf people are challenged in learning because they have restricted access to spoken language input and English results to be a struggle for many of them. The author pointed out that deaf competence in English may not involve spoken English because the use of speech depends on whether they receive speech training or they prefer not to talk for personal or cultural reasons.

ASL-English contact was analysed by Lucas and Valli (1992) who claimed that *contact signing* is a system composed by features of both languages, plus some typical features. The features of English and ASL occur simultaneously, so the authors assert contact signing is different from code mixing or code switching. More recent works claim instead that the explanation of the code mixing is more

convincing, and the contact signing' production switches from ASL to English-like signing.

Kuntze (2000) studies code mixing between ASL and English isolating fingerspelled words in sentences. In some sentences containing fingerspelling, the structures are presented as passive constructions. So, he notices a code switching from fingerspelled English morphological passive part of speech to ASL neuter lexical items.

So, Berent (2004) defined an extreme form of mixing called *simultaneous communication*: production of spoken English and signed ASL (or more frequently Manually Coded English, MCE) at the same time. This kind of production presents a high level of compatibility between sign and speech, but it is also English driven: the structure of the speech was purely English and the signing followed the English order, omitting systematically English morphemes like copulas and auxiliaries, or morphemes expressing tense, aspect and plurality, using <*redundancy mechanism to allow recoverability of information*>.

2.3 BORROWING

Although this dissertation's topic focus on borrowing by sign language from written language, this phenomenon is linked with other kind of borrowings. In the following section, it will be briefly described a situation of contact and borrowing of two sign languages, American Sign Language (ASL) and Mexican Sign Language, and then the outcomes of the contact between ASL and American English will be analysed. In this and also in the following sections, ASL will be the main topic and

this choice was motivated by the great quantity of researches about this sign language and the relatively small quantity on other sign languages.

2.3.1 BORROWING BETWEEN SIGN LANGUAGES

The United States territory near the Mexican border is an area of intense language contact both between Spanish and English, and ASL and Mexican Sign Language (LSM). This is due to the fact that the Deaf communities of both countries are in contact. Many Deaf Mexicans settled in the US because of a better social service situation, and in 2001 in the Texas Valley they were between 50 and 150 people. Both group of Deaf people, Mexican and American, are bilingual in both sign languages and are proficient in one or both spoken language of the area. There is a wide individual variation, though. Because of this situation, American interpreters of the area started to be trained in LSM, but also in Spanish. In fact, between LSM features there are also Spanish mouthing and fingerspelled words.

Contact between two sign languages produces outcomes that are difficult to identify. One of this outcome is the integration of a loan from one sign language to another. It is not as evident as in spoken languages because sign languages share many phonological characteristics. ASL and LSM have the same origin, from Old LSF (Langue des Signes Française, French Sign Language), but are different languages, because they have the influences of respective indigenous sign languages. Language contact between them led to various phenomena (Quinto-Pozos, 2008). One of them was the borrowing of the "F-handshape" by LSM: handshape for letter F was different by a small degree in LSM and ASL. Sometimes this exchange of handshape could be interpreted as an interference phenomenon

(LSM signers used LSM #F signing ASL), but more than the 50% of the participants of the study, native signers of LSM, used ASL #F signing LSM words, making the researcher think that a borrowing process was in progress, and that the ASL #F was becoming an allophone of the LSM #F. Also another kind of borrowing, this time of English mouthing, was attested. When articulating LSM signs similar to correspondent ASL signs, some of the participant mouthed English words. Lucas and Valli (1992) noted that such mouthing signal the use of a "contact sign" and it is a common feature of the contact.

Although there are these examples of borrowing between sign languages, contact between them mostly seems to produce interference and "accent", more than a complete borrowing, because of the similarity between them, caused by the geographical proximity and the belonging to the same language family.

2.3.2 ASL's ORIGINAL BORROWINGS

Before speaking of modern borrowings from English, a brief history of ASL will help understanding its attitude toward both borrowing and fingerspelling.

ASL made an intense lexical borrowing from OldLSF. In fact, ASL originated from a pidgin of OldLSF and local sign language of the 19th century (Woodward, 1978). In 1817 was established the American school for the Deaf and many others school for deaf children. In these schools, deaf people had the opportunity of creating many signs, which were standardized at Gallaudet University. ASL went through a period of flourishing development. But this development stopped in 1880, after the Milan Congress (International Congress on Education of the Deaf) where sign language was banned in the school for the deaf. Only after the 60s, with Civil Rights movements in US, deaf people fought to introduce in schools the Total

Communication system, an education system involving signs, fingerspelling, speech, lip-reading, gesture, facial expression and writing (Schirmer, 2001). Still ASL was not considered, even by Deaf people, a true language: researches on sign language started in that period and were published after a few years. Though, ASL gained wide popularity, and deaf people obtained also the creation of new technologies permitting them to communicate remotely.

Cagle (2010) analysed a corpus of Cistercian Sign Language, a sign language used by monk in their period of vow of silence and traced a path of borrowing of common and religious lexical items by ASL trough LSF. A description of CSL signs dates back to 1068 and its use was attested all over Europe. Abbé de l'Epée, played a fundamental role in the creation of LSF in the 18th century (he was the founder of an important school for deaf pupils and the first to use sign language to teach them). As an educated member of the church, he presumably knew LSF and used it to create some of his signs. He collected the signs used by deaf people in Paris, modified them and, using the Spanish manual alphabet, initialized them. This process resulted in a corpus of LSF signs borrowed from CSL. Entering ASL, these signs went through some change in a phonological, grammatical and semantic level. The phonological change seems to follow the path described also by Radutzky (1990), so towards ease of articulation and need of clearer signs. The most significant grammatical change consists in deleting the first morpheme of CSL compound, when these morphemes were used to specify a semantic group ("cat" was signed with two signs, ANIMAL+CAT, but was kept only CAT by LSF and ASL). Semantic change was common when the LSF signs passed to ASL (for example, POOR became BEG, AFTER-LATE, STAY-CONTINUE).
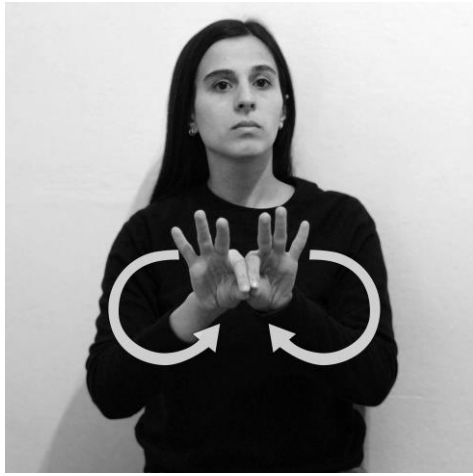
Figure 2.3: ASL's FAMILY
(#F initialization)

Figure 2.4: ASL's GROUP
(#G initialization)

2.3.3 BORROWING FROM ENGLISH

English has a pervasive influence on ASL and it is possible to find forms of English language both in fingerspelled words and in signs. Recently, after the linguistic researches proved sign languages are natural languages and have the same dignity of spoken ones, bilingual schools emerged all around the world, and deaf people started to stand for their right of using their language. It can be noticed that the influence of oral language on sign language is strong. This was caused by a long period of contact between the two languages that brought to an indispensable bilingualism. This contact had different outcomes.

A deep analysis on lexical borrowing in ASL was made by Battinson (1977) who distinguishes between natural and artificial influence. The artificial one includes a series of sign systems developed to create a "signed English" where new signs were created to express inflectional and derivational morphology. Most of these signs were rejected by the deaf community mostly because are incompatible with ASL

syntax. But it seems that initialized signs derive from this kind of influence and now they are widely used, even in case of other non-initialized native signs. Initialization is a productive word-building process (Cagle, 2010), especially nowadays, when deaf people have the chance to obtain more specialized job, so they need new words to express technical terms. The criteria to be an initialized sign is being part of a semantic group. The most common ones are group (FAMILY, GROUP —see Figure 2.3 and 2.4—, TEAM, CLASS, etc) or colour (BLUE, GREEN, YELLOW, PURPLE, etc). Every sign of a group share the same movement, location and orientation and are disambiguated through the initialized configuration. Some initialized signs that were created by not sharing movement with other signs were considered by the Deaf community unnecessary, so their use was rejected. Brentari and Padden (2001) proposed three constraints for the creation of new initialized words: 1) two-type constraint, so that a sign can have no more than two handshapes in it; 2) align (L) constraint and 3) align (R) constraint, so that the letter used to create the sign can be only the leftmost or the rightmost one. Align (L) and align (R) can be applied together in just one sign, which is CURRICULUM.

Natural influence is articulated on four types (Battinson, 1977) and they all are the unconscious result of language contact. The first type is the borrowing of syntax structure from the communication with hearing signers that are not fluent in ASL. The second is loan translation: ASL usually borrows English glosses and translates them using combination of signs (LOOK-FOR, or the use of the sign for STAND to render the idiomatic phrase "can't stand someone", see Figure 2.5). The third kind is the use of fingerspelled words even if an equivalent sign already exists. Usually,

Figure 2.5: Idiomatic expression of "can't stand (someone)"
resulting from coupling the signs of CAN'T and STAND

it is a matter of preference of the signers. Some of them do not use fingerspelling at all, others use it consistently. It is considered socially compulsory to use it during an introduction to spell a proper name, and it is used often to disambiguate homophone signs when the context does not. The use of fingerspelling increases when the deaf person is communicating with a hearing person, although for hearing people is really difficult to read fingerspelled word at a normal speed (that is, on average, 6 letter per second). The fourth type is lexical borrowing: a group of fingerspelled words that undergo a phonological, morphological and/or semantic modification to fit sign language linguistic patterns. This kind of loans are used mainly by deaf people communicating with other deaf people because they are incompatible with signed English, and such pidgins.

Battinson recorded nine kinds of potential variation in different reproduction of fingerspelled loan signs, so their integration into the language as proper signs: deletion, location shift, handshape change, movement adding, orientation, reduplication, second hand addiction, morphological involvement and semantics.

Some of these variations are compulsive, some occur in a few signs. None of these loans <*have folk etymological tradition*>, but signers claimed they derive directly from fingerspelling. Between the complete fingerspelling and the modified loan (not always identifiable as fingerspelling) it is possible to track an intermediate passage. The loans are related to the original fingerspelled words by precise and regular rules. Firstly, they undergo a profound phonological restructuring: the author notices that the most common processes are letter deletion of handshapes, adding movement, and change of location. The deletion is a primary step towards the loss of identity with the fingerspelled complete word of a loan. In ASL signs, there could not be more than two different handshape, so two letter loans, like #NO, #DO (see Figure 2.2) or #BS, are not subdued to deletion. Although three letter words are deleted consistently, and the middle letter is cancelled (#JOB). Also in four and five letter signs, the majority is left with the first and the last letter (#WOULD), while just four are composed by three letters (#COOL). There are cases where some words maintained all letters (#TOAST) and go into further modification. A study by Reich (1974) noticed that, when fingerspelling complete words, some subjects produce first and last letters three times slowly than medial letters, probably because they are considered more salient. When there is more than two letters, and the deletion was already made, processes of assimilation or dissimilation can be made to make the sign respectively faster or clearer.

The second major change is that of location: more than 50% of the signs in the author's sample undergo this change. Normal location of fingerspelling is in front of the chest at the same side of the dominant hand. The shift of the location of the loans can be to the face, the shoulder, the centre of the body (neutral space), up or down the dominant-side chest or to the passive hand creating a two-handed

asymmetrical sign. The main conclusion that can be drawn on this kind of modification is that the loans are not restricted to fingerspelling space, but, like native signs, can be articulated in various part of the body. Changes of movement (and thus also of orientation) are the less systematic, but present in almost every loan. They are connected to change of location, because movement allows the change, and basic changes are the exaggeration of the normal movement to go from a handshape to another. Although, they are mostly based on movement of other similar native signs. A prove that these loans conform to ASL parameters is that they become near homonymy of native ASL signs (for example, #NO and THIRTY). Morphological modification consists in the fact that location and movement mark the loan as part of native classes of ASL signs both grammatical and semantic. Semantic restructuring of loans also takes place providing new lexical distinctions.

2.4 BORROWING FROM THE WRITTEN LANGUAGE: ORIGIN OF FINGERSPELLING

Alphabet has two features: written symbols corresponding to phonemes or cluster of sounds, and possibility to transfer speech to a visible medium. Deaf have the need to transform oral language in visible form. Since the ancient Greek and Roman culture there are cases of use of body or just hands to represent the letters that are alternative to the use of papers. Benedictine monks developed a hand alphabet in order to communicate during periods when they made silence vows or when they had to deal with ill people unable to speak. Even if the writing system allowed the creation of a permanent record, it also altered the nature of face-to-face interaction. Instead, the hand alphabet remains on the speaker's body and permits more intimacy. Sign languages are different from the alphabets created by

monks and are not related to other languages but are profoundly influenced by them and deaf people need to communicate with hearing people in everyday life. So, manual alphabet is present in many sign languages. Sometimes the gesture representing letters are iconic, but most are arbitrary chosen or borrowed from other fingerspelling systems. Words are built executing gestures in sequences differentiating from signs that are usually composed by one or two "syllables" and that involve simultaneous expression of meaning.

Plann (1997) tracked the origin of European manual alphabet to the contact between the aforementioned Benedictine monks and deaf children taught by them (always children of rich or noble families) to read and speak. Manual alphabet, easier to learn and use than a sign language, was adopted both as teaching tool by monks first and system of communication with members of the family by the children. The first famous user of sign language in teaching was Abbé de l'Epée (see 2.3.2), and was one of his pupils, Laurent Clerc, who brought the French Sign Language and de l'Epée fingerspelling system to US. In the first part of the 19th century deaf people used fingerspelling alongside sign language.

In 1878, after the opening of his school, an educator named Zenas Westervelt claimed that he devised a new method using fingerspelling only. The "Rochester Method" was very popular in that period, but in the sixties was completely abandoned.

Different sign languages used different manual alphabet relating also to the writing system of the language. In ASL, fingerspelling is pervasive and constitutes up of 35% of signed discourse, while in other sign languages, as in LIS, is more used for foreign words. ASL is used to borrow missing words but also to create a

contrast between an intimate and familiar vocabulary and the foreign and distant lexicon of English origin. Already in the 1913 a movie titled "The preservation of Sign Language" showed that manual alphabet was established early in the history of ASL.

Analysing the production of native signers, Padden and Gunsauls (2003) find that the inventory of words is not evenly distributed: the majority is composed by nouns, both proper and common, followed by adjectives and verbs. Although, there is an even division between proper and common nouns. This finding is someway surprising because fingerspelling is often said to have the purpose to represent names of people and places. There was no distinction in gender, occupation or educational level of the signers and the production was uniform. Only some differences in age: the percentage of proper noun decrease with age, from 9 to 4%. There was, though, a variation in the inventory: younger and more educated signers have an inventory of fingerspelled words of over 250, presumably because of the need of more technical vocabulary. So, native signers' inventory of fingerspelled words vary depending on their experiences, but how they use fingerspelling vary very little. In ASL fingerspelling is not used only to represent English words, but to borrow selectively in particular contexts. Topic seems to influence the frequency. Technical topics elicit a higher frequency of fingerspelling. Also, native signers fingerspell more frequently than non-native, and compared individually, the difference of frequency is of 20%. Fingerspelling, far from being a substitution for signing, was adapted as a source of vocabulary creation. It exists as a contrast to native ASL vocabulary, also for already existing words. An example was an elementary school teacher, who, to introduce to the class a math problem, used the fingerspelled #PROBLEM emphasizing the difference with the sign

PROBLEM, described as a word for more familiar situation. It is possible that the lexicalized and the original sign are both currently used, as in CAR and #CAR. It is also common that signers, in compounds, decide to fingerspell just a part of it (as in LIFE#STILE) (Valli, 2000).

Apart from the possible influence of the Rochester method, another, more plausible, theory is that this high amount of fingerspelling reflects the high level of education reached by deaf people in United States because of the presence of Gallaudet University, the only university bilingual for a sign language.

2.4.1 THE CASE OF ETHIOPIAN FINGERSPELLING

Ethiopian fingerspelling system represents a syllabary, and for this reason it is slightly different from the majority of Western fingerspelling.

Fingerspelling comprises a set of sign giving names to every character of the written language. It is divided in two groups of system: one-handed, deriving from the Old French Sign Language, and two-handed, native to the British Sign Language family, manual alphabets. Although there are similarity between sets of sign language of the same family, some cultural differences can modify the handshapes of the sets (ASL letter T is considered offensive by French deaf people, see Section 3.4).

In Ethiopia the language spoken is Amharic, which has a phonetic inventory of 33 consonants and 7 vowels. The form of the syllable is made such as phonetically similar syllables are also graphically similar. Symbols of the vowel is attached to the consonant, modifying the reading. Because of this structure of the written system, Ethiopian signers represent every consonant with a different configuration and add a particular movement or orientation to represent the vowel (Duarte, 2010).

Some handshapes bear an iconic similarity with the corresponding consonant but it is not enough to be a transparent system to Ethiopian non signers. Consonants and vowels are described as bound morphemes (as Liddell and Johnson do with numeral features in ASL in 1989) and their combination is simultaneous, that is a typical characteristic of sign language morphology. The consonant alone does not exist in Amharic orthography, so the handshape associated with a null movement represents the pair "consonant+[ä]", the neuter vowel in Amharic speech.

Fingerspelling is subjected to phonological alteration compared to other signs, for example it does not present the hand lowering movement between signs. The alteration results in a transferred place of articulation, to the left or to the right of the neuter space that support the need to attach fingerspelled signs. Another strategy to support this need is a slight modification of the movement, depending from the following sign, to reach faster the following location.

So, Ethiopian Sign Language fingerspelling is different from the majority of Western signed languages because of its bound morpheme allowing simultaneous morphology. This fact made Ethiopian Sign Language more similar to written language.

2.5 CONCLUSIONS

In this chapter it was analysed the relationship between sign and oral languages and the linguistic outcomes of their contact. The most important example of borrowing from written language is fingerspelled signs and their variation: lexicalization, initialized signs and middle-letter initialization. Another

example is loan translation: in the next chapter these two forms of borrowing would

be resumed in the analysis of character signs.

CHAPTER 3
CHARACTER SIGNS

In the previous chapters, was analysed borrowing in general and how this phenomenon expresses itself when sign languages are involved. In the following chapter, the ideogram-based borrowing, or character sign, phenomenon will be studied. This phenomenon, typical of signers who uses a written system involving ideograms, or Chinese characters, was not specifically examined by linguists in Japanese Sign Language. Starting from this point, this dissertation aims to provide a starting analysis of it. The uniqueness of this phenomenon lies both on the fact that is common only of a small group of cultures, and on the fact that represent a connection between a fingerspelled word and a proper loan. But it is also a connection between a written language and a *performative* one. In Japanese, specifically, it is believed to represent a particular link existing between Japanese people and their writing system.

The chapter will start with a brief exposition of the situation of deaf people and their sign language in Japan. Later, it will be shown the research on JSL character signs.

3.1 THE SOCIAL CONTEXT IN JAPAN

Historically, JSL existed in a diglossic context, i.e. with written and spoken Japanese and its use was limited into the family or between friends. Recently,

though, JSL was considered more important by the institutions too and it spread covering a large part of the population (George, 2011). For Deaf people is difficult to be considered an ethnic group, and as so be protected. It is because they have a different language from the majority of the population, but they are not defined geographically, they are scattered in the country territory. In Japan, from a survey of 2008, deaf people are the 0.25% of the population, and it is believed that only one sixth of them signs. Deaf schools focus on oral education, and even into deaf families signing is avoided, because parents are persuaded that their children would have more opportunities if they learn to speak and not to sign. From high school to university, interpretation service is rare or even not-existent, and deaf students have to turn to volunteer to non-professional interpreter and to volunteer note-taking from their peers. So, there is an implicit denying the possibility of social mobility for deaf, that are often unemployed or employed in low level job. Even if deaf people want to extend use of JSL out of the informal environment, in public institution there is a lack of sign language friendly environment, so the norm is that is impossible to use JSL outside the deaf community and the small circle of professional surrounding it.

3.1.1 DIVISION BETWEEN SIGNERS

Nakamura (2010) described an internal division between Japanese signers, both on an anthropological and on a linguistic level. The definition of language as "Japanese Sign Language" is a political one. Often, between speakers/signers of the language do not agree on what belong to the language or not. There can be generational, geographic, religious factor determining differences. In Italy, this situation is perfectly portrayed by the multitude of dialects.

In Japan, there are opposed forces trying to maintain control over JSL: the Japanese Federation of the Deaf (JFD), the national public television and radical member of the Deaf community who seek for a "pure JSL". In 1997, the Federation organized meetings to create and promote innovative signs for various fields, as newspaper words. The goal was of publishing at least one hundred signs for words absent in JSL dictionaries in a series of books called "New Signs". In fact, Japanese is a language inclined to borrow and create words (see Section 1.3.3) and deaf people are left out from this fad of words. Because of that, they are even more disadvantaged in understanding spoken and written language. The most common method to catch up is the invention of neologisms. The goal is not to be left behind from the rest of society. But, for the Federation, the goal is also to maintain control on JSL from other influences, such as D-Pro and NHK.

D-Pro is an association created in the 90s which claims the existence of a pure sign language without influences of spoken and written Japanese, so without mouthing, initializing or using Japanese grammar system. D-Pro states that Federation JSL is not the real JSL and those who uses it are not deaf but just hard-of-hearing, promoting a discrimination toward them. Ironically, one of D-Pro leaders is the head teacher of the only interpreting program in the country, so the interpreters does not know the Sign Language used by a big part of the population. Another influence is NHK, the public broadcasting television network that creates new signs for the "Sign News" programme, avoiding fingerspelling. Because of the presence of open-captioning, interpreters use the programme to learn new sign, and this mix is confusing for deaf people. The last influence on JSL is from students of the Tsukuba College of Technology, the only college for deaf people. Students are really playful in their signing, mixing and exploring the

language, creating fingerspelling interjections or verbal puns —for example the new sign for "pizza", created with a P on the knee (in Japanese "hiza")—.

This situation is confusing for most signers, but the recent general tendency of the community is to go towards the American model and a system similar to Total Communication (see Section 2.3.2).

3.2 THE JAPANESE WRITING SYSTEM

To understand the process of borrowing, is necessary to explain briefly the written system of Japanese. Japan did not have a written system until the 4th century. In that period, Chinese characters (called by Japanese people *kanji*) were imported and partially adapted to the Japanese phonetic system. Chinese and Japanese are profoundly different languages and the adaptation was a long and complex process. But, because of this difference, a complete adaptation was impossible. So, in the 8th century were designed two different syllabaries, *hiragana* and *katakana,* using part of kanji characters. The former is more delicate and was used by women and in poetry. The latter, instead, was reserved for men. Kanji never stopped to be used, because of the importance of the Chinese culture and the established habit to use it in official documents.

Nowadays, after a language reform in 20th century, the use of these three systems is changed. Kanji characters are used to represent free morphemes. Hiragana integrates this system representing bound morphemes (suffix, particles, etc), while katakana is used mostly to transliterate loan-words. Because of the complexity of this system (the commonly used kanji are between 2000 and 3000, and the total number is considered more than 13,000), it was suggested several

一　　　　　雲龍雲龍龍

a)　　　　　　　　　　　　b)
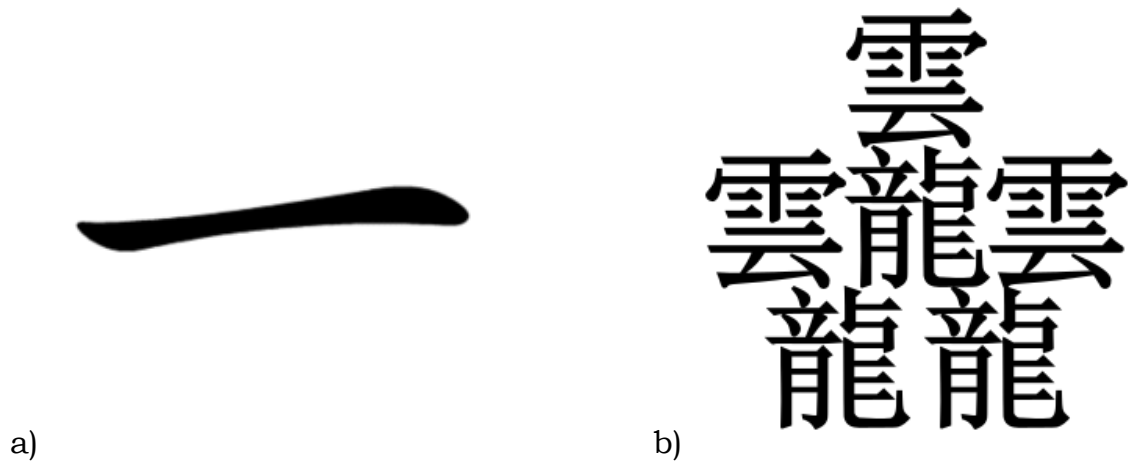
Figure 3.1: The kanji (a) with less strokes ("ichi", "one") and the kanji (b) with more ("taito", name)

times to abolish kanji and use only hiragana to write. This is not possible because kanji are useful to disambiguate. Actually, in Japanese there are many homophones. An example is the word "kaeru", that can be written as 帰る, 変える, 返る, 蛙, 買える, 換える, respectively meaning "to go back", "to change", "to turn over", "frog", "may buy", "to change back". For this reason, and to respect the tradition, they were maintained.

For the purpose of this dissertation, kanji were analysed considering their stroke's number. Knowing how many strokes a kanji is composed by is important to understand the meaning and to write it. In common use kanji, the stroke's number can be from 1 to 23, but exists characters with 58 or even 84 strokes (see Figure 3.1). As it is possible to see in the pictures, the level of complexity of the character can be very high. Therefore, kanji with a low number of strokes were considered. Because they should be easier to reproduce using hands.

Another possible division of kanji is based on level of difficulty. Every character is registered in a system that correspond to the levels of the certification of proficiency in Japanese language (the Japanese Language Proficiency Test, or JLPT). The levels start from N5, the lowest, to N1, the highest. Each kanji in Japanese language may be attributed to this level scale.

3.3 CREATION OF SIGNS IN JSL

In ASL new loan words are introduced in the language using fingerspelling, and then lexicalizing them, or using initialization, as explained in chapter 2. In JSL, using fingerspelling is rather difficult because the Japanese syllabary contain 47 symbols and fingerspelling 47 different hand configurations is impossible. To compensate, JSL uses space and movement (as Ethiopian Sign Language, see Section 2.4.1). As a result, the system is slow and tedious to sign and problematic to read. It was chosen to represent only the sound of the syllables, and not to diversify between hiragana and katakana. Because of the homophony problem (see Section 3.2) there is no way, except for the context, to understand the right meaning in fingerspelling. So, it is rarely used to introduce new borrowing. It is used instead to introduce new lexicon for the first time or to represent names. Instead, because of the oral-oriented education, mouthing is very common.

The impact of written Japanese is more significant. The use of character signs, signs which are <*isomorphic with respect to their orthographic representation*>, was considered a marginal phenomenon (George, 2011). George states that this kind of signs are not numerous, because of physiological limitation of the hand. The most widespread borrow from written Japanese is supposed to be loan translation of compounds. In written Japanese, compounds are prevalent

because a lot of words are composed by two or more characters. To form JSL signs, the character are translated individually to recreate the compound (BUN+POU, from "bunpou" [文法], "grammar"). Typical of JSL is also a modified loan translation homophone-derived: a part of the compound is translated exactly, while another part is translated as a homophone in the oral language. For example, Katamachi is a name of a street in Tokyo, and it is written with the characters of "settle" and "street". In Japanese, "settle" is pronounced "kata", but also "shoulder" is pronounced like that. So, in JSL, Katamachi is signed SHOULDER+STREET. This is an example of the playful attitude, typical of Japanese and, as we see, also of JSL, in the creation of words. The new compound, even if is a loan, become completely original and rely, to be understood, on a deep knowledge of both orthography and phonology of Japanese.

Nakamura (2006) describes also another way to create signs, similar to the use of classifiers, so iconic or quasi-iconic: the sign for "digital" (DEJITARU) was created simulating a sine-wave with 0 and 1.

3.4 CHARACTER SIGNS

As previously told, researches on character signs are rare. One of the most significant was conducted by Ann (1998) for Taiwan Sign Language (TSL). Her aim was that of describing another kind of contact between written and sign language.

In Taiwan, the first who seems to have provided an education to deaf people are the Japanese who, during the occupation of 1895-1945, established two schools for the deaf, sending also teachers who knew JSL. In fact, TSL and JSL, due to the intense influence of Japan in that period, are very similar and belong to the same

Figure 3.2: Character sign of 中, using the mouth

Figure 3.3: JSL sign for "brother"

language family. Ann specifies that Chinese characters are not iconic: only 1% of them was originally a graphic representation of physical object (and then was simplified and stylized), and the rest began to represent sounds. The difference from alphabetic writing systems is that instead of single phonemes, Chinese characters represent Chinese syllables. Also, they give also a clue of the meaning of the word. Characters signs are attested at least in four sign language: in Taiwan, Hong Kong, China and Japan. At the time of the article, no systematic analysis of the character signs had been made, and the author of this dissertation did not manage to find works about this topic neither today.

Ann found several characteristics typical of character signs. To begin with, in the four languages of the countries mentioned above, although the Chinese characters may be exactly the same, there is a difference in the character signs of the same ideogram: 人, the character of "person", is signed with two hands in TSL and with just one, drawing in the air, in JSL. A study by Fu and Mei (1986) on Chinese Sign Language distinguishes two different way to construct character signs: writing in the air with the index finger or using both hands to imitate the

shape of the whole or a part of the character. Later researches find other two methods: mixing of use of handshape and drawing, and use of the mouth to represent a part of a character, together with the hands (see Figure 3.2). Ann (1998) excluded writing in the air from her analysis because it is a strategy used also by hearing people so it might not be a real sign but only an imitation of a gesture.

As introduced in Section 2.2.1, other typical characteristic of character signs are handshapes. Sign languages present a specific set of handshapes used to sign. For example, in LIS, the handshape in the Figure 3.3 is not used, because in Italy it represent an offensive gesture. Although, in JSL is allowed. Ann noticed that in character signs are present some additional handhapes. These are not used in other signs, but are used in character signs because of their iconic resemblance to Chinese characters.

Also, a last characteristic is that handedness become contrastive. Character signs have to be produced using the right hand as the dominant hand. Instead, in other signs there is no difference between using the left or the right hand. Probably the reason for this characteristic is the presence, in Chinese writing system, of characters that are mirror images of others (see Figure 3.4).

3.5 CHARACTER SIGNS IN JSL

As specified in the first part of this chapter, the author of this dissertation did not manage to find any studies on the extension of the phenomenon of character signs, neither in JSL nor in the other sign language where this phenomenon was attested. Although, it must be pointed out that is possible the existence of studies that were not translated in English, or difficult to find in Europe.

Figure 3.4: Characters of a) "enter" and b) "person"

3.5.1 METHOD

The aim of this dissertation is to provide a detailed as possible analysis of this particular kind of borrowing in Japanese Sign Language. To do so, it was made a list of every kanji written with less than 6 strokes. The characters with more than 6 strokes were excluded because of their increasing complexity. Although, some 7 strokes and one 8 strokes characters were included in the list. In fact, this exceptions were relatively simple and common use kanji. Alternatively, they were already identified as character signs by preliminary research.

The list, obtained from the "Kodansha's essential Kanji dictionary", a dictionary including 1,945 common use kanji, was composed by 231 characters (complete list in Appendix). Each character was looked up in four online JSL dictionaries:

Spread the sign (https://www.spreadthesign.com/jp/)

Weblio 手話辞典 (http://shuwa.weblio.jp/)

NHK 手話 CG (http://cgi2.nhk.or.jp/signlanguage/)

Section of the website of the Japanese Institute for Sign Language Studies 日本手話研究所 (https://www.newsigns.jp/)

3.5.2 RESULTS

Some of the characters, for a total of 16, highlighted in the list with the colour red, were not found in any dictionary. The possible causes of this absence were presumed to be three. The first is that these characters represents typical characteristics of Japanese and absent in JSL, as counters (in the list were included the counters for books and small animals, respectively kanji no. 41 (冊) and no. 53(匹)). A second possible cause is that characters that have a synonym already present in the sign language dictionaries were not included, because the synonym were Japanese's and not JSL's (characters no. 100 (孔) and 212 (穴) are

Table 1. Character signs

KANJI	READING	STROKES	MEANING	KANJI	READING	STROKES	MEANING
一	いち	1	one	川	かわ	3	river
二	に	2	two	庁	ちょう	5	board
三	さん	3	three	巡	めぐる	6	to wander
中	なか	4	in	災	わざわい	7	disaster
井	い	4	well	田	た	5	paddy field
人	ひと	2	man	甲	こう	5	first
介	かい	4	means	非	ひ	8	fault
兆	ちょう	6	trillion	千	せん	3	thousand
入	はいる	2	to go in	小	ちいさい	3	small
凸	とつ	5	convex	日	ひ	4	sun
北	きた	5	North				

synonyms, and the former was not found). A third cause may be that the dictionaries are still relatively new, and words that are common but not so often used, as "blade" (刃, no. 47), were not included yet.

From the remaining characters, 215, 21 character signs were found (see Table 1). So, they constitutes the 9.77% of the total. Furthermore, 6 additional kanji were highlighted as possible character signs (see Table 2). In fact, their resemblance with the kanji characters were not so striking as the others, but, in this dissertation's author's opinion, there may be a link with the corresponding character. If added to the list, they would increase the percentage to 12.5%. It is necessary to specify that this percentage are not referring to the total of kanji. The entire list represent the 11.9% of the common use characters present in the "Kodansha's essential kanji dictionary". So, considering the total number of characters in this dictionary, the character signs that have been found are about the 1.4%.

Table 2. Possible character signs

KANJI	READING	STROKES	MEANING	KANJI	READING	STROKES	MEANING
上	うえ	3	up	文	ぶん	4	sentence
士	し	3	samurai	石	いし	5	stone
央	おう	5	centre	羊	ひつじ	6	sheep

3.5.3 DISCUSSION

In section 3.4, it was summed up Ann's research (Ann, 1998) on character sign, which identify four different strategy to form them. Drawing in the air, using handshapes to reproduce them, mixing the handshapes and drawing and using mouth to reproduce a part of the character. Between the character signs that were found, there is no evidence of the last formation strategy. Instead, they can be inscribed into the other three, following the division below.

Drawn character signs:　人　介　凸　千　(Figure 3.5 to 3.8)

Handshape-formed character signs (one hand):　一　二　三　川　巡　(Figure 3.9 to 3.13)

Handshape-formed character signs (two hands):　中　井　入　北　田　小　日 (Figure 3.14 to 3.20)

Mixing strategy character signs:　兆　庁　災　甲　非　(Figure 3.21 to 3.25)

All characters were reproduced entirely, except for 巡 and 庁. These two characters are signed taking only one part, respectively the upper and the lower part.

Figure 3.5: Character sign of 人

Figure 3.6: Character sign of 介
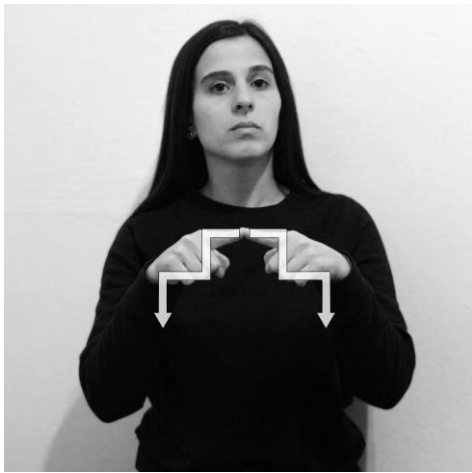
Figure 3.7: Character sign of 凸

Figure 3.8: Character sign of 千

Figure 3.9: Character sign of 一

Figure 3.10: Character sign of 二

Figure 3.11: Character sign of 三

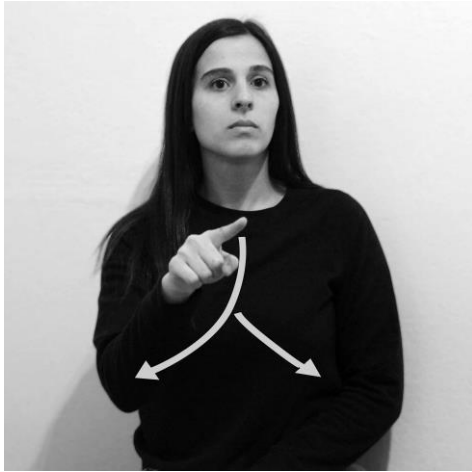Figure 3.12: Character sign of 川

Figure 3.13: Character sign of 巡

Figure 3.14: Character sign of 中

Figure 3.15: Character sign of 井

Figure 3.16: Character sign of 入

Figure 3.17: Character sign of 北

Figure 3.18: Character sign of 田

Figure 3.19: Character sign of 小

Figure 3.20: Character sign of 日

Figure 3.21: Character sign of 兆

Figure 3.22: Character sign of 庁

Figure 3.23: Character sign of 災

Figure 3.24: Character sign of 甲

Figure 3.25: Character sign of 非

Considering the complexity of the characters, they may be divided in two groups. As explained in section 3.2, Japanese kanji are categorised in 5 level, according to level of the Japanese Language Proficiency Test. Interestingly, the characters are put at the two extremes of the scale. The 52% of the character signs are obtained from level 5 kanji, while the 38% from level 1 and 2. There are only one occurrence of characters of level 3 and one of level 4. From this results it can be made a hypothesis. Kanji of level 1 and 2 are used in most specific context and represent a complex vocabulary. Therefore, borrowing of this kind of kanji is probably a *need* borrowing. Instead, for simple characters, the need motivation can be excluded: some of the character sign of the list, in fact, have a synonym sign (both currently used). This kind of borrowing is more plausible that were brought into the language for a *prestige* motivation.

The most evident borrowings are the character signs produced by drawing in the air which is considered a form of prestige. The drawn character, as Ann (1998) also pointed out, are a common habit of Japanese people. In schools, and also in Japanese language courses, is common to use drawing in the air to memorize characters. Also, in everyday life, this strategy is used to show a character to someone else when there is no possibility to write it. As mentioned in Section 3.4, Ann believed that drawn character signs cannot be considered real signs, but a mere imitation of a gesture. Although, there are proof that drawn character signs are actual morphemes. In JSL, character signs as SEN (see Figure 3.6) are in fact sign language morphemes. This is because, beside of the possibility of using them in isolation, they can be combined with other morphemes to form a compound, for example in numeral incorporation (Ktejik, 2013). So, they are integrated into the sign language syntax and there seems to be no reason to consider them different from other signs.

In the previous chapters, prestige borrowing were shown as outcomes of intense contact between two cultures, especially when the borrowing culture is in a *substratum* situation (see Section 1.1.5). Japanese Sign Language, similarly to other sign languages, fits in this description. This may explain the reason why JSL borrowed from Japanese very common words as "person", "sun", "small", etc.

From the lexical point of view, there is no apparent criterion of choice of the words as for diffusion. Instead, from the morpho-syntactic one, there may be some relations. Kanji characters can represent words that belong to different syntactic category. The chosen meanings, written in Table 1 and Table 2 are the most common, and the widespread meanings for the characters. To begin with, 5 out of 21 character signs represents numerals. Because kanji for numerals are

only fourteen, it seems that borrowing is a common strategy to express numerals. Among the other characters, 12 are nouns, 2 are verbs and there is also one occurrence of adverb and one of adjective. As mentioned, nouns are the lexical category easier to be borrowed, because of the fact that are easier to integrate into the linguistic system. Also this series of borrowings is following the borrowability scale in Section 1.1.4. Although, numerals seems in this case to be an exception, so it is possible to write another scale: *nouns> numerals> verbs> adjectives/adverbs.*

The six possible character signs were excluded from the discussion because of this uncertainty. Further analysis on the etymology of the signs would be necessary to determine if they are character signs or not (see Figures 3.26 to 3.31).

This kind of borrowing may be considered different from usual borrowing of sign languages from spoken/written language. First of all, it is not plausible a parallel with fingerspelling. Even if they are both borrowing phenomena connected with the written language, they may be considered different. In fact, Japanese Sign Language has already a fingerspelling system, and, as specified in Section 3.3, Japanese deaf people are unwilling to use it. Instead, character signs are, if not many, very common. Also, they are often used, representing words that are widespread. Therefore, character signs phenomenon reflects a particular relationship between a culture and its writing system. Excluding the need borrowings, JSL could easily turn to other way to create signs representing the words in the lists, as other sign language did. Especially the most iconic. It can be argue that Chinese characters are also iconic, and JSL has imitated what it is the collective imagination about common object, already corresponding to the

characters. Although, not every character in the list is iconic, even if it is a common word. For example, numerals as "thousand" or "trillion", or adjectives as "small", or even nouns as "person". So, the iconicity of the characters may be excluded as a link.

3.5.3 SIGNED NAMES

This characteristic relationship between Japanese people and their writing system is portrayed by the Japanese Sign Language way to give signed names. Signed names are given and used from signers all over the world, and also in JSL there is this custom: a Deaf person have at least one "official" signed name, and several other names, used in different situation, especially in informal contexts. In JSL the official signed name represents the surname of the person, reflecting the importance that the name of the family has in Japanese culture. This kind of attitude is very different from others sign languages.

A study by Nonaka, Mesh and Sagara (2015) aims to expand previous descriptions of signed names, to provide a complete list of the used strategies. A set of 216 JSL signed names were collected from a series of interviews, in 1993 and 1997, and video-recorded self-introduction from "Minna no Shuwa" ("Everyone's Sign Language") television program. Moreover, an online video-recorded demonstration in 2013 of signed names was used (so there were no interaction with the name bearers). The first observation on JSL signed names is that they are mostly composed by a number of signs equivalent to the number of character of the written name of the bearer: each sign was, although in different ways, representative to the character to which it corresponds. Each one of the characters of the written surnames, taken alone, of the analysed set can be

represented by one sign, associated with the meaning, shape or pronunciation. After the conversion, the component signs (416) were put together to form the surname. The authors identify nine different formation strategies for the formation of signed names.

First group of strategies, shared by many other sign languages, has no relation with Japanese language, and is the description of the person, of physical characteristic or behaviour. In the set, two types of *descriptive signed names* were present in JSL (description of the bearer and description of historical figures', with whom the bearer share his surname, characteristic), but were only the 4% of the total number of the components. The rest of the set was associated with the written surname, and were called *representational signed names.* The first strategy is initialized names, using the JSL fingerspelling, but is not used often. Instead, the second, *loan translation* is the most common. It is based on the translation of the different characters forming the surname. Creativity using this strategy leads to another one, which is *homonymic loan translation.* So, a name like Hara can be signed as FIELD (the meaning of the character of the name) and BELLY (a different character that is also pronounced "hara"). Initialized names and loan translation can be mixed, but there were only two names formed in this way in the set. 25% of the set are character signs. Name formed entirely by fingerspelling were excluded by the set, but an included strategy was, as cited, mixing of fingerspelling and other strategies together. The last strategy is "air-drawing": the character, instead of being represented by a sign imitating the shape, is literally drawn in the air, common teaching technique in Japanese school of written language.

It is surprising that the widespread "description" strategy is infrequent, unlike other sign languages, while the dominant strategy is the representation, with different methods, of the surname of the person. This can be explained by the education system and the custom of Japanese people of using the first name of a person only among intimates. However, in the author's opinion there is also a stronger relationship, in Japanese culture, with the written language. In addition, deaf people are sensitive to this relationship. In fact, as stated in section 3.1, almost every Japanese deaf person goes in hearing school. Therefore, the habit of Japanese schools to give importance on writing teaching reflects also on deaf people.

Figure 3.26: Character sign of 上

Figure 3.27: Character sign of 士
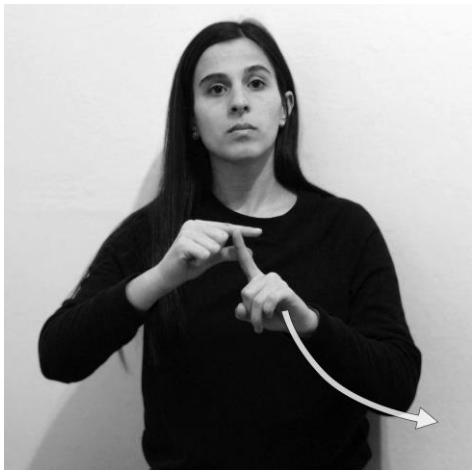
Figure 3.28: Character sign of 央
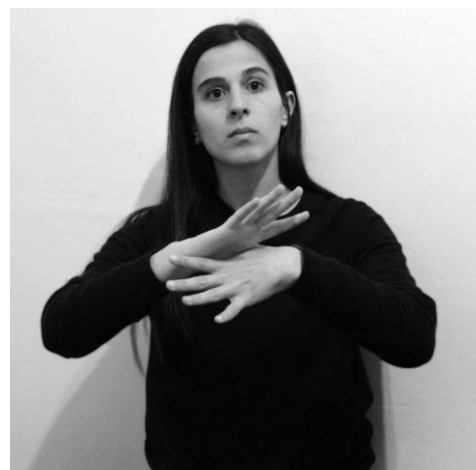
Figure 3.29: Character sign of 文

Figure 3.30: Character sign of 石

Figure 3.31: Character sign of 羊

CONCLUSIONS

It has been shown how lexicon is borrowed as one of the consequences of contact between languages and cultures (see Chapter 1). As sign and spoken languages coexist in the same territory, contacts between them are impossible to avoid. It was later shown how this contact may have different linguistic outcomes: borrowing of gestures, loan translations, semantic group formation and fingerspelling (in Chapter 2). Eventually, the phenomenon of character signs was analysed.

This dissertation had two main objectives about character signs in JSL: ascertaining their presence in the lexicon, and investigating their use.

Concerning the lexicon, 215 kanji were selected among those being made of a small number of strokes and compared with the relative signs looking for similarities. 21 of these signs were clearly derivative from the written characters, while other 6 were uncertain. The latter group featured signs which showed a certain resemblance to the kanji, but which were neither unambiguously derivative from it, nor so dissimilar to be discarded. Altogether, the 9.77% of the selected character set were unmistakably character signs, and an additional 2.73% were a partial match (see Chapter 3, Section 3.5.2).

Concerning the use, the current tendency in linguistics — to equalise fingerspelling and character signs, as they both conveys a signified by mimicking a written signifier — was disputed. The author's personal opinion, in fact, disagrees with this idea: the two phenomena stem from different stages of linguistic contact,

make use of unique configurations, and are used in separate context (see Section 3.5.2). Firstly, fingerspelling is present in many sign languages, and it can easily occur in cases where the cultural contact between deaf and hearing people is not intense. Its use is determined by the intensity of the contact and by the relationship between the sign and the written language. Instead, character signs are present only in cultures that have a writing system using ideograms. They are borrowing into the core vocabulary, so the result of an intense contact (see Section 1.2.2). Secondly, character signs make use of unique handshapes, breaking the rules of fingerspelling, which is, instead, purposely designed to use solely standard handshapes. Thirdly, fingerspelling, because of its complexity, is rarely used in JSL, while character signs, representing very common words, are used very often.

An element was found which separates Japanese fingerspelling from the other ones. Out of the four languages featuring character signs, in fact, three use only Chinese characters in their written form, unlike Japanese, which makes use of both kanji, and sillabaries (see Section 3.2). Thus, while fingerspelling in Chinese, Taiwanese, and Hong Kong Sign Language has a connection exclusively with the oral medium (as they lack an alphabet to copy from), fingerspelling in Japanese Sign Language has a connection with both the oral and the written medium (in the form of its syllabic writing system). Hence, while character signs are the only connection Chinese, Taiwanese, and Hong Kong Sign Language have with the written language, Japanese has both fingerspelling and character signs. Thus, Japanese deaf people have the option of either using fingerspelling or character signs to explicitly reference the written medium, and yet they have a complete disregard for the former and a penchant for the latter. Character signs in JSL and,

above all, their use, are the results of the particular relationship between Japanese people and their written language.

The limits to the findings of this present work are the relative small size of the set of kanji examined compared to the entire corpus of Japanese characters, the lack of an exhaustive list of character signs in Japanese Sign Language, and the practical impossibility by the author to interview actual Japanese signers. For these reasons, the results shall be regarded as preliminary. Further researchers, especially on the field, are necessary to compile a thorough set of character signs, and to assess their use and the attitude Japanese signers have towards them.

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APPENDIX

List of Kanji

KANJI	READING	STROKES	MEANING
一	いち	1	one
二	に	2	two
三	さん	3	three
丁	ちょう	2	even
下	した	3	under
上	うえ	3	up
丈	たけ	3	height
万	まん	3	ten thousand
不	ふ	4	no
世	せ	5	world
中	なか	4	in
主	ぬし	5	owner
乙	おつ	1	second
久	ひさし	3	time ago
井	い	4	well
亡	ない	3	dead
人	ひと	2	man
以	い	5	through
介	かい	4	means
今	いま	4	now
化	か	4	transformation
仏	ほとけ	4	Buddha

KANJI	READING	STROKES	MEANING
仕	し	5	to work for
休	やすむ	6	to rest
件	くだり	6	section
仲	なか	6	friend
任	まかせる	6	to entrust
何	なに	7	what
元	もと	4	origin
兄	あに	5	older brother
光	ひかり	6	light
先	さき	6	previous
兆	ちょう	6	trillion
入	はいる	2	to go in
公	おおやけ	4	public
八	はち	2	eight
共	とも	6	together
兵	へい	7	soldier
円	えん	4	Yen
内	うち	4	inside
冊	さつ	5	counter for books
凡	すべて	3	everything
凹	へこみ	5	trench
出	でる	5	to go out

Kanji	Reading	Strokes	Meaning
凸	とつ	5	convex
刀	かたな	2	sword
刃	は	3	blade
切	きる	4	to cut
分	ふん	4	minute
力	ちから	2	strength
加	か	4	increase
北	きた	5	North
匹	ひき	4	counter for small animals
巨	きょ	5	giant
十	じゅう	2	ten
千	せん	3	thousand
午	ご	4	noon
升	ます	4	(measurement)
半	はん	5	half
占	うらなう	5	divination
印	しるし	6	stamp
厄	やく	4	bad luck
去	さる	5	to delete
弁	べん	5	dialect
又	また	2	again
収	おさまる	5	to include
反	はん	4	against
友	とも	4	friend
了	りょう	2	complete
口	くち	3	mouth
右	みぎ	5	right

Kanji	Reading	Strokes	Meaning
古	ふるい	5	old
召	めす	5	to call
各	かく	6	each
名	めい	6	name
吐	はく	6	to vomit
司	し	5	nice
史	し	5	history
同	おなじ	6	same
吏	り	6	official
四	よん	5	four
囚	しゅう	5	prisoner
因	いん	6	reason
回	まわり	6	stroll
土	つち	3	ground
圧	あつ	5	pressure
士	し	3	samurai
冬	ふゆ	5	winter
夕	ゆう	3	evening
外	そと	5	outside
多	おおい	6	many
大	おおきい	3	big
太	ふとい	4	fat
天	あま	4	heaven/sky
夫	おっと	4	husband
央	おう	5	centre
失	うしなう	5	to lose
女	おんな	3	woman

Kanji	Reading	Strokes	Meaning	Kanji	Reading	Strokes	Meaning
子	こ	3	child	庁	ちょう	5	board
孔	あな	4	hole	式	しき	6	ceremony
字	じ	6	letter	弓	ゆみ	3	bow
安	やすい	6	cheap	引	ひく	4	to pull
宇	う	6	space/universe	弔	とむらい	4	funeral
守	まもる	6	to protect	芋	いも	6	potato
寸	すん	3	(measurement)	花	はな	7	flower
寺	てら	6	temple	込	こむ	5	to be crowded
小	ちいさい	3	small	辺	あたり	5	neighborhood
少	すこし	4	a little	巡	めぐる	6	to wander
当	あたる	6	to hit	心	こころ	4	heart/soul
尺	しゃく	3	(measurement)	必	かならず	5	sure
尼	あま	5	nun	戸	と	4	door
尽	つくす	6	to run out of	手	て	4	hand
山	やま	3	mountain	才	さい	3	hability
川	かわ	3	river	打	うつ	5	to strike
工	く	3	tool	払	あらう	5	to pay
左	ひだり	5	left	支	ささえる	4	to support
己	おのれ	3	self	文	ぶん	4	sentence
市	いち	4	market	斗	と	4	(measurement)
布	ぬの	5	cloth	斤	きん	4	(measurement)
干	ほす	3	to dry	方	かた	4	direction/person
平	ひら	5	ordinary	日	ひ	4	sun
年	とし	6	year	旧	きゅう	5	previous/past
幻	まぼろし	4	illusion	早	はやい	6	early
幼	おさない	5	childish	旬	じゅん	6	ten days
広	ひろい	5	large	曲	まがる	6	to bend

Kanji	Reading	Strokes	Meaning	Kanji	Reading	Strokes	Meaning
月	つき	4	moon/month	汚	きたない	6	dirty
肉	にく	6	meat	汗	あせ	6	sweat
木	き	4	tree	江	え	6	gulf
本	ほん	5	book	火	ひ	4	fire
未	まだ	5	again	灰	はい	6	ash
末	すえ	5	end	灯	ひ	6	light
朱	しゅ	6	scarlet	災	わざわい	7	disaster
札	ふだ	5	card	炎	ほのお	6	flames
机	つくえ	6	desk	父	ちち	4	father
朴	ぼく	5	simple	片	かた	4	side
材	ざい	6	material	牛	うし	4	cattle
欠	けつ	4	lack	犬	いぬ	4	dog
次	つぎ	6	next	犯	おかす	5	to assault
止	とまる	4	to stop	玄	げん	5	dark
正	ただしい	5	right	玉	たま	5	gem
死	しぬ	6	to die	王	おう	4	king
母	はは	5	mother	甘	あまい	5	sweet
毎	まい	6	every	生	いきる	5	to live
比	くらべる	5	to compare	用	よう	5	to use
毛	け	4	hair	田	た	5	paddy field
氏	うじ	4	surname	甲	こう	5	first
民	たみ	5	population	申	もうす	5	to tell (humble)
気	き	6	air	由	よし	5	motivation
水	みず	4	water	白	しろ	5	white
永	えい	5	eternity	百	ひゃく	6	hundred
氷	こおり	5	ice	皿	さら	5	plate
汁	しる	5	soup	目	め	5	eye

Kanji	Reading	Strokes	Meaning
矢	や	5	arrow
石	いし	5	stone
示	しめす	5	to show
礼	れい	5	kindness
穴	あな	5	hole
立	たつ	5	to stand
竹	たけ	6	bamboo
米	こめ	6	rice
糸	いと	6	string
羊	ひつじ	6	sheep
羽	はね	6	feather
耳	みみ	6	ear
自	みずから	6	self
舌	した	6	language
色	いろ	6	colour
虫	むし	6	insect
血	ち	6	blood
行	いく	6	to go
衣	ころも	6	clothes
西	にし	6	West
見	みる	7	to see
言	いう	7	to say
貝	かい	7	shell
車	くるま	7	car
非	ひ	8	fault