6. Discussion and conclusions

The main aim of this thesis was to provide the first linguistic description of selected aspects of Inuit Uukturausingit (IUR), the sign language of the Inuit. Documentation of IUR is important as the language is highly endangered – a fact which recently became clear with the passing of informant Yvo Samgushak. It is hoped that the present study stimulates further research efforts, thus helping to preserve this unique language. In the previous chapters, important features of IUR have been reported and discussed. Beyond the description, the goal of this thesis was to add to our understanding of sign language typology, by comparing selected aspects of IUR grammar to other urban and rural sign languages. In this chapter, IUR is put in typological perspective (section 6.1), and I try to provide an explanation of some of its unusual features (section 6.2). Finally, suggestions for further research, including methodological considerations, are made (section 6.3).

6.1. IUR in typological perspective

In chapters 2 to 4, I discussed the phonological make-up of IUR signs, about the availability and realization of various morphosyntactic and syntactic processes, and about the representation of selected semantic aspects in IUR. The following section first reminds the reader of the most interesting and possibly unique features of IUR (section 6.1.1); subsequently an attempt is made to classify IUR typologically on the basis of the features that have been described (section 6.1.2).

6.1.1. Typologically unusual features of IUR

With respect to the semantic fields kinship and colour, the most interesting features of IUR are (i) the fact that it has no separate lexical signs for FATHER and MOTHER, and (ii) that there is no sign for WHITE. These findings are in striking contrast with language universals that have been proposed for these semantic fields. First, Greenberg (1966) stated that all languages have basic (i.e. non-complex) terms to discriminate the gender of parents, but in IUR gender distinction is only possible by means of compound signs. Second, Berlin and Kay’s (1969) description of basic colour terms across languages predicts that if a language has basic colour terms, this set would always include terms for BLACK and WHITE. IUR, however, does not obey this universal, as it does have a sign BLACK, but does not have a sign for WHITE.

Morphologically, IUR is very interesting in that it employs an unusual pluralisation strategy, namely adding the non-dominant hand to one-handed signs that are articulated in neutral signing space. Given that this strategy exploits the possibilities afforded by the manual-visual modality, it would not be surprising to find it in other sign languages as well (after all, signers commonly make use of the non-dominant hand for other morphosyntactic operations, such as reciprocity). Moreover, from a phonological point of view, the two-hand strategy should be available in every sign language, as it creates balanced two-handed
signs, a sign type that is expected to exist in all sign languages. It may thus well be the case that other sign languages use this strategy, but that it simply has not yet been described. In other words: future research might reveal that IUR is typologically not that unusual in this respect.

In the area of morphosyntax, I found that in IUR verbs are commonly modified to agree with loci in signing space. Obviously, this type of modification by itself is not unusual, as it is attested in many urban sign languages. What is unusual is the finding that IUR allows for agreement with absolute and abstract locations. In contrast, in YSL verbs never agree with abstract loci, but only with absolute locations. Furthermore, it appears typologically peculiar that transitive verbs in IUR only agree with object arguments. While it has been reported that in urban sign languages, agreement with the object is generally the unmarked case, agreement with subjects is still commonly observed.

Now I turn to a comparison of these and the other (typologically less unusual) features described for IUR to those of urban and rural sign languages.

6.1.2. Towards a classification of IUR

In the previous chapters, semantic and grammatical aspects of IUR have been compared to patterns identified for other sign languages. In this section, these differences and similarities are summarised and further explored in terms of the sociolinguistic type IUR patterns most with: urban or rural sign languages (see section 1.1.1). As should be clear by now, the group of rural sign languages is not homogeneous. Obviously, the same is true (at least to some extent) for urban sign languages, although there is a tendency to assume that sign languages of this type show significant overlap, that is, are rather homogeneous with respect to the realization of certain grammatical phenomena. More research in this area is needed to gain a better understanding of the attested variation and similarities, especially studies that use a quantificational approach. Still, I draw on the available studies in this comparative evaluation. The semantic aspects are discussed first and then the grammatical aspects.

As mentioned in section 6.1.1, IUR has a unique colour and kinship system. The fact that the set of colour terms is extremely small (two terms) makes IUR more comparable to rural sign languages, even though IUR has no sign for WHITE. Both Adamorobe and Ban Khor Sign Languages have only three colour terms, for the colours BLACK, WHITE and RED, thus obeying Berlin and Kay’s universal (Nyst 2007; Nonaka 2007). YSL and Kata Kolok each have four colour terms. In addition to terms for BLACK, WHITE and RED, YSL has a sign for YELLOW, and Kata Kolok one for GRUE (Adone et al. 2012; De Vos 2011) – once again, this is in line with Berlin and Kay’s proposal. An exception among rural sign languages is Konchri Sain (Jamaica), as it has six colour terms (Adone et al. 2012)\textsuperscript{14}. In contrast, urban sign languages generally tend to have colour signs for at least

\textsuperscript{14} Note that I am avoiding the phrase \textit{basic colour term} on purpose; as explained in section 3.2.5, I propose a redefinition of this term.
each colour of the rainbow, which means seven colours. IUR thus patterns with rural, and not with urban, sign languages in the domain of colour terms.

The kinship system of IUR also consists of a strikingly small set of terms, i.e. three terms, and is thus comparable to that of other rural sign languages. Nyst (2007), for example, describes nine kinship terms for AdaSL, five lineal and four non-lineal kinship terms. It has to be recalled, however, that she includes person terms like female, which were excluded here. Several urban sign languages have been found to have a large set of terms (once again, possibly including person terms): e.g. NGT has 33 kin terms and Danish SL has 44 – including lexical variants for both languages. Nepali Sign Language has the largest set, with a total of 58 kin terms (Wilkinson 2009). While this seems to suggest a difference between rural and urban sign languages, Wilkinson (2009) also found a set of only six kinship terms for Croatian Sign Language, an urban sign language. Bauer (2012) does not investigate kinship for YSL, but she describes a sign meaning ‘mother’s mother’, which suggests that YSL, just like the surrounding spoken language, has a fairly extensive kinship system. This implies that the size of the kinship system is not a feature that would distinguish the two sign language types. Still, it appears that overall, rural sign languages do have smaller sets of kinship terms – and thus IUR patterns more with rural than with urban sign languages in this respect.

As for some of the grammatical aspects addressed in this thesis, urban and rural sign languages are not clearly different. There is, for instance, no one-to-one relation between the negation system (manual vs. non-manual dominant) and sign language type (Zeshan 2004a). While it is true that all rural sign languages studied to date feature a manual dominant system, such a system has also been described for some urban sign languages (e.g. LIS and LIU). Consequently, this feature, too, does not allow for a distinction between rural from urban sign languages. Additionally, it would also be premature to conclude that rural sign languages as a group are manual dominant, as negation has only been studied for a few rural sign languages. With respect to nominal pluralisation strategies, I conclude that the same strategies that have been described for urban sign languages, such as DGS, also apply in IUR, although different strategies may apply to different types of nouns. IUR, for instance, allows reduplication of certain nouns that are body-anchored, while DGS does not. The pluralisation of nouns has not been described for other rural sign languages yet, but even if future studies would reveal that across rural sign languages, plurality is not usually marked on nouns, this would not distinguish rural sign languages from urban sign languages, as a lack of plural marking on nouns also characterises IPSL and TİD, two urban sign languages.

Verb agreement is an area in which clear differences between urban and rural sign languages have been identified in previous studies. All urban sign languages studied to date distinguish three different verb types, two of which, the agreeing and spatial verbs, allow spatial modifications to mark agreement. In Auslan, for instance, 53% of verb types allow for spatial modification. In contrast, most rural sign languages show only limited verb agreement (AdaSL), or absence of verb agreement altogether (e.g. Kata Kolok and Al Sayyid Bedouin SL), although in YSL 26% of verb types allow for spatial inflection. Since 45% of IUR verb types allow for spatial modification, IUR is closer to Auslan than to YSL or other rural sign languages in this respect (remember that to date, no quantification of
verb types is available for other urban sign languages). Interestingly, IUR also patterns with urban sign languages, in particular Auslan, with respect to the optionality of agreement: of all potentially agreeing verb tokens, a strikingly similar percentage actually shows agreement.

Finally, with respect to entity classifiers, the two types of sign languages pattern similarly, in that they are not homogenous. Most urban sign languages have entity classifiers, but the numbers and forms may differ. NGT, for instance, has 15 entity classifiers while IPSL has only two. Among rural sign languages, entity classifiers are less frequent. AdaSL and PISL, for instance, do not make any use of entity classifiers, at least not systematically, while YSL makes use of only three (fairly specific) entity classifiers. Kata Kolok, however, has eight entity classifiers. IUR, with ten entity classifiers, thus falls between the two extremes, but appears closer to sign languages with a richer classificatory system. Specifically, it is closer to NGT than to AdaSL and YSL. Taken together, it thus appears that morphosyntactically – i.e. with respect to pluralisation, verb agreement, and entity classifiers – IUR patterns with urban rather than rural sign languages.

Table 6.1 summarises the findings concerning the topics investigated for IUR and provides a comparison to selected urban and rural sign languages. The cells specify the presence/absence of a certain grammatical feature (+/−), a quantity, or both (in the case of entity classifiers, where the number of classifier handshapes is provided, when it is reported in the literature). Negation is an exception, as the type of negation system is specified. Obviously, even in this small table, some cells remain empty (’??’), as not all of the topics have been studied for all of the sign languages.

Table 6.1: Comparison of the selected typological aspects of IUR with other sign languages.

<table>
<thead>
<tr>
<th></th>
<th>DGS</th>
<th>NGT</th>
<th>LIS</th>
<th>IPSL</th>
<th>TID</th>
<th>IUR</th>
<th>KK</th>
<th>AdaSL</th>
<th>YSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour terms</td>
<td>&gt; 7</td>
<td>&gt; 7</td>
<td>&gt; 7</td>
<td>??</td>
<td>??</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>kinship terms(^a)</td>
<td>28</td>
<td>33</td>
<td>19</td>
<td>13/43(^b)</td>
<td>25</td>
<td>3</td>
<td>??</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>negation</td>
<td>nmd</td>
<td>nmd</td>
<td>md</td>
<td>nmd</td>
<td>md</td>
<td>md</td>
<td>md</td>
<td>??</td>
<td>md</td>
</tr>
<tr>
<td>plural marking on noun</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>??</td>
<td>??</td>
<td>??</td>
</tr>
<tr>
<td>verb agreement</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−/+(^b)</td>
<td>−/+</td>
</tr>
<tr>
<td>entity CL</td>
<td>+</td>
<td>+</td>
<td>(15)</td>
<td>+</td>
<td>+</td>
<td>(10)</td>
<td>+</td>
<td>(8)</td>
<td>−</td>
</tr>
</tbody>
</table>

\(^a\) md' = manual dominant; 'nmd' = non-manual dominant
\(^b\) Wilkinson (2009) reports regional variation between Bangalore (13) and Karachi (43).

Keeping in mind the results reported in Table 6.1, I can now return to Zeshan’s (2008) figure that I introduced in section 1.1.1 (repeated here in slightly modified form as Figure
The comparison reveals that with respect to grammatical features, IUR does not clearly fit with either the village or the urban sign language type, but rather appears to be situated between these two groups. This situation is not at all problematic, since the figure was originally proposed in order to group sign languages based on geographical and sociocultural factors and thus does not imply typological homogeneity within a box. The implicit assumption of shared features within groups stems from the work of other researchers, for example Meier (2002) for urban sign languages and Nyst (2012) for village sign languages. Clearly, the attested linguistic variation within the groups suggests considerable caution in predicting typological features on the basis of geographical and sociocultural properties.

In terms of geographical and sociocultural properties, IUR does not clearly fit into the ‘urban’ or ‘village’ boxes. Socioculturally it might fit with the village sign languages, but geographically, it is quite different, as its use is not restricted to a single community. Remember that I pointed out earlier (section 1.1.1) that all village sign languages are rural sign languages, but not all rural sign languages are village sign languages. The original figure contained a box with a question mark and this would seem to be where IUR should belong with a label ‘rural non-village SL’. According to this classification, YSL would be placed in the same box. Obviously, future research might reveal that yet another box has to be added to the figure.

![Figure 6.1: The proposed mosaic of sign language data.](image)

Although caution has been advised in assuming typological features based on this classification, it nevertheless seems likely that some of IUR’s linguistic properties may be explained by sociocultural factors, such as the relative number of second language learners and context-dependency. In the next section, I attempt to account for some of IUR’s linguistic features based on these two factors.

### 6.2. Accounting for typological aspects of IUR

Both the small colour set and the small kinship set can be explained by the fact that IUR is a highly context-dependent language. Clearly, absolute pointing, which has been shown to
be commonly used, is a context-dependent strategy for referring. Absolute pointing to objects (for colour) and geographical locations (for relatives) may render a large set of kinship/colour terms unnecessary. Washabaugh (1986) makes a similar observation for PISL. In addition, the lack of formal education has likely influenced the lack of colour and kinship terminology. Education requires decontextualised terms, since it involves talking about objects out of their context. If no formal education exists, the need to create decontextualised terms does not arise.

As was made clear in section 4.1, rural sign languages rarely exhibit verb agreement, with the exception of YSL. IUR however, allows agreement with both absolute and abstract locations, while YSL only allows the former. Although other rural sign languages also make abundant use of absolute pointing (e.g. Kata Kolok), they do not allow verbs to agree with these absolute locations. An explanation for this difference may lie in the environmental and geographical setting. Other rural sign languages are mainly used within small village communities, and IUR traditionally was used while the Inuit were still nomadic. In that period, knowing directions was crucial to survival. This may have led to the emergence of agreement in locative verbs, with verbs such as GO and WALK being able to indicate these directions in conversations. This explanation becomes more plausible when I take into account that YSL also allows for verb agreement with absolute locations, and that YSL (i) has also traditionally been used by hunters-gatherers and (ii) is also used in several communities spread over a fairly large area in northern Arnhem Land, Australia.

In IUR, this absolute use of agreement then possibly expanded to agreement verbs, which only agree with grammatical (abstract) locations in signing space. Additional factors may have facilitated this development. First, an explanation for the presence of verb agreement with abstract loci may be found in the social setting. For AdaSL, for instance, it has been suggested that the large proportion of second language (L2) users has influenced the language’s structure. In IUR, the large proportion of second language users may have had an influence on semantic fields and phonology (topics that neither Kusters (2003) nor Lupyan and Dale (2010) address), but as explained in section 5.2.3, no clear influence is seen on morphosyntactic structure. It is likely that the large proportion of L2 signers has influenced the structure of village sign languages such as AdaSL and Kata Kolok, because the hearing and deaf people all live in the same village. Not only is a high proportion of hearing L2 signers found in these villages, in absolute numbers the group is also rather large. In contrast, the number of L2 signers of IUR is quite high, but they are dispersed over the different communities. Per community one thus does not find a proportionally large group of hearing L2 signers, nor a large group of deaf signers. Therefore, contact between L2 signers and a deaf person occurs less frequently in the Inuit communities than the level of contact documented for village communities such as Adamorobe (Nyst 2007), Ban Khor (Nonaka 2007), or Desa Kolok (Marsaja 2008). The sociolinguistic situation is therefore different in such a manner that the influence of the hearing L2 signers on IUR is less significant than in the village sign languages studied thus far.

Another explanation for the presence of agreement with abstract loci may be found in the language contact situation. ASL has been shown to have influenced the lexicon of IUR, and it may well have been of influence on the grammar, too. Since ASL allows for agreement with abstract loci in signing space, IUR may have borrowed this system. This
line of reasoning may also explain why I found this type of agreement in IUR while it is not attested in YSL: after all, YSL has not been influenced by Auslan in any way. However, it has to be pointed out that an explanation along these lines is faced with the problem that the bilingual (IUR-ASL) deaf signer PU and the other monolingual signers used this type of agreement in the same way.

The data from IUR have clearly extended the range of sign languages on which to base typological research. The recent description of YSL (Bauer 2012) has also added to the range, as it represents quite a different type of sign language, a secondary sign language. IUR and YSL, however, share sociocultural and geographic characteristics that allow grouping them as one sign language type: rural non-village sign languages. As is true for the other sociocultural groupings, YSL and IUR do not form a homogenous sign language type, as they share certain grammatical properties, but also differ in important respects. Apart from a grouping of sign languages based on their sociolinguistic characteristics, I can also classify sign languages typologically based on their grammatical features, as I suggested several times throughout this thesis, and summarised in section 6.1.2 above. In the previous chapters, several typological classifications have been re-visited or proposed. Some sign languages would still be grouped together. For example, both DGS and NGT are urban sign languages and both have non-manual dominant negation systems, but it is the question whether these two classifications have anything to do with one another, as other sign languages of the same type would be classed in a different typological group: LIS, for instance, is an urban sign language but features a manually dominant negation system.

6.3. Perspectives for further research

The present thesis did not attempt to present a comprehensive grammar of IUR. Rather, a number of grammatical aspects were selected which I considered typologically interesting, but even for these aspects, certain descriptive gaps still need to be filled. During fieldwork and data analysis, I was also faced with a number of practical and analytical challenges, some of which I want to share with the reader, as they are not only relevant for the study of IUR but rather for sign language research in general.

One of the first issues encountered at the start of this project was the absence of a fieldwork guide or questionnaire for sign language documentation. Clearly, the development of such a guide would be useful for future sign linguists who go on fieldwork, so that each new sign language can be described in similar ways, based on the same set of questions and topics. The experience and expertise of several sign linguists combined would be a good base for such a guide, which would be highly useful for cross-linguistic comparisons.  

15 A blueprint for sign language grammars is currently being developed by a European research project funded by the European Cooperation in Science and Technology (COST). The project COST Action IS1006 (“Unraveling the grammars of European sign languages: pathways to full citizenship of deaf signers and to the protection of their linguistic heritage”) focuses on European urban sign languages and will provide a
Furthermore, it would be useful if other researchers also made an effort to quantify verbs and classifiers, so that the sign language they investigate could be included in the graph in Figure 4.13, the two-dimensional inflectional continuum we proposed. At the moment, it is generally assumed that urban sign languages pattern very similarly in this domain, but it may well be the case that they differ with respect to verb agreement, for instance. In general, corpus studies would be a more natural representation of sign languages than studies that rely on elicitation tasks, as corpus data are a more natural reflection of language use than elicited data.

Furthermore, it would be interesting to study the amount of pointing to actual locations in urban sign languages. I have explained that in IUR, absolute pointing is frequently used to refer to people and locations. Absolute pointing has also been described for several village sign languages (see, for instance, Marsaja (2008) for Kata Kolok, and Nonaka (2007) for Ban Khor Sign Language), but has scarcely been addressed in studies of urban sign languages. It might well be the case, that absolute pointing is employed more frequently in urban sign languages than one would expect, and that village/rural sign languages are thus less special in this respect as might appear at first sight.

Besides these considerations that are relevant for linguistic research on sign languages in general, there are also two issues specific to IUR that should be addressed in future research. First, since one of the research questions was whether IUR had an indoor and an outdoor variant as a result of the cold climate, it would have been important to also conduct research outdoors. This, however, turned out to be impossible. Although ethical guidelines do not include considerations concerning weather conditions, I considered it unethical to propose an outdoors interview, since people stay inside when the temperature drops below -20°C. Before going on the first fieldwork trip, I had been aware of the limitations of a camera in the extreme cold, but I had not taken into account my own as well as my informants’ safety. Further research needs to be conducted in order to reveal whether IUR has an outdoor and an indoor variant.

With respect to the lexical variation of IUR, an extensive elicitation project based on pictures should be carried out, and this should be done in more of Nunavut’s communities. For the present project, this was unfortunately impossible due to financial limitations.

The above challenges and gaps notwithstanding, the present study on selected aspects of IUR grammar is a valuable contribution to sign language typology. The discussion reveals that IUR is ‘a piece in the puzzle’. It combines linguistic features of both urban and rural sign languages and indicates that the relation between the sociocultural and geographical categorisation of a sign language and its linguistic properties has to be approached with more caution than to date. More documentation of IUR is also needed to fill the gaps and gain a deeper understanding of this unique sign language. Furthermore, since IUR is highly endangered, further documentation should help preserve the language for future generations.

detailed table of contents, a manual, and an overview of available elicitation materials (for details see: http://signgram.eu/).