SIGN LINGUISTICS DEAF & HOH CULTURE CURRENT RESEARCH CUNEIFORM DEAF EXPERIENCES SIGN-HUB PROJECT VIDEO GAMES

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DEAR LANGUAGE LOVERS,

While we won't be holding any fresh-off-the-press copies of Kat-Blad in our hands this year, we could not be prouder of issue no. 114 of KAT-Blad! Believe me when I say that this edition is the product of many hours of hard work, long Zoom calls, passion, and dedication – not only by our wonderful board members but also everyone who submitted an article. Thank you to everyone who contributed!

This issue is particularly special for two reasons, firstly – this 2020-21 academic year marks KAT-Blad's 50th year of existence! From humble beginnings when single staff members diligently wrote loose articles to the first full magazine by a handful of students, into digital editions created by an amazing team of budding linguists, KAT-Blad has undergone many developments... including a name change! While originally titled SAT-Blad, we are more than happy with KAT-Blad and the birth of our katje! Secondly, this is our first themed edition of KAT-Blad. While there are of course articles on other areas of language and linguistics, many of the pieces in this issue focus on Sign Language and Deaf & Hard of Hearing culture. It is important to give space for sign languages, as they are often invisible and marginalized in our hearing-majority cultures and communities. Recognition is but the first step in a long and important road towards equality of language modalities, which we hope to contribute to in this issue.

With that said, we hope that you are inspired by something you read in the following pages to strive to be more deaf-friendly in your own life! Happy reading, and thanks for celebrating the big 5-0 with us!

Groetjes,

Brittany Daize

CONTENTS

DEAF-"FRIENDLY"-ISH VILLAGES Sasha Damonte

A PUZZLE AT HAND: **ACQUIRING A SIGN** LANGUAGE

Dr. Beyza Sumer

THE PHONEMES OF SIGN LANGUAGE Merel Koorn

SIGN LANGUAGE ACROSS **BORDERS** Britt Daize

THE CULTURAL AND LINGUISTIC HERITAGE OF DEAF COMMUNITIES IN EUROPE Roland Pfau

CURRENT RESEARCH AT THE UVA Lizzie Oakey

DEAF IN THE LEGAL **SYSTEM** Jo-Anne van der Sluijs

SOUND

ALTERNATIVES TO GAME Domonkos Király

HOW THE SUMERIANS TAUGHT US TO READ Miki Bozhinoski

(POP)-CULTURE!



THE ONE-INCH BARRIER Aemun Ahmad



DEAF-"FRIENDLY"-ISH VILLAGES

By Sasha Damonte

You probably already know that sign languages have an unfavourable place of being a minority language in every major society and that they belong exclusively to the Deaf communities. But what if I told you that this is not true for every single sign language? What if I told you that there are in fact communities where the majority knows a sign language? Indeed, these small communities existed in the past and some continue to prevail in rural areas around the globe. Somewhat misleadingly called deaf villages, they come to be due to a high incidence of congenital deafness, where an unusually high number (but still a minority) of people are deaf. What sets them apart from other communities is the incredible degree of integration between deaf and hearing people who also acquire the local sign language (de Vos & Zeshan, 2012).

Unfortunately, all village sign languages attested today are endangered and some have disappeared altogether, at times even before being documented. Also referred to as indigenous or rural sign languages, their existence is ironically threatened by the recognition and the successive expansion of larger, urban or deaf-community sign languages (de Vos & Zeshan, 2012). As of today, Glottolog (Hammarström et al., 2020) enlists 56 rural sign languages, three of which are marked extinct, and three are nearly extinct. Moreover, for many of them, the status is unknown due to the lack of research, which means that these numbers are probably not representative of reality.

But don't be too dismayed, my linguistic confrère! Rural sign languages (SLs) are being continuously discovered, as they are emerging and rapidly evolving within small (relatively) isolated communities. In this article, I will introduce you to three rural SLs - one that has gone extinct, one that has undergone a serious hardship, and one that has recently emerged.



Martha's Vineyard: a language utopia



Martha's Vineyard is an island situated off the southeastern coast of Massachusetts. It is famous for its beautiful vacation spots and for once being a linguistic utopia where hearing and deaf people shared a language: Martha's Vineyard Sign Language (MVSL). For over two hundred years the island was characterized by a high incidence of hereditary deafness. The recessive trait, along with the Old Kentish SL, was brought to the island by English settlers from Kent County in the 17th century. Their continued marriage traditions contributed to a rapid increase in the number of deaf people. The average rate of deafness on the whole island was 1:155, while in Tisbury and Chilmark, predominantly Kentish towns, it was 1:49 and 1:25, respectively (Groce, 1999; Kusters, 2010).

Throughout this time, Vineyarders themselves did not have a clear understanding of how deafness appeared and was passed down in their families. It was simply seen as something that "sometimes happened" and was socially accepted (Groce, 1999: 51). In deaf and hearing families, children were exposed to MVSL from early on. Signing skills were reinforced and improved by continued use in everyday life. Without the language barrier, social activities on the island were not reserved for hearing or deaf people, as one Vineyarder recalls: We would sit around and wait for the mail to come in and just talk. And the deaf would be there, everyone would be there. And they were part of the crowd, and they were accepted. They were fishermen and farmers and everything else. [...] people would tell stories and make signs at the same time so everyone could follow him together. Of course, sometimes, if there were more deaf than hearing there, everyone would speak sign language - just to be polite, you know (Groce, 1999: 60)

"

Due to the establishment of boarding schools, and later the decline of job opportunities, by the end of the 19th century, the increasing number of islanders were marrying off-islanders. The arriving of new settlers further diluted the gene pool. The last person affected by Vineyard deafness who used MVSL died in 1952 (Groce, 1999; Kusters, 2010). The story of Martha's Vineyard, sadly short-lived but prosperous, language gives us a glimpse into a more harmonic bilingual and, most importantly, bimodal society.

Adamorobe: how legislation can kill a language

Adamorobe is a village in Ghana, where the hereditary deafness due to the "deaf gene," a Connexin 26 R143W mutation, resulted in an unusually high number of deaf residents. By the end of the 18th century, Adamorobe Sign Language (AdaSL) emerged, shared among deaf and hearing people every day, bridging the gap between the two worlds. The villagers were happy with the way things were until 1975 when the Ghanaian government decided to take a stance on the increasing number of deaf villagers in Adamorobe. In order to decrease the number of children born with hereditary deafness, they passed a destructive law, making marriages between deaf people illegal. The oldest deaf woman of the village recollects the dark day in the history of her people with deep sorrow (Kusters, 2012):

"

"

Everywhere [in Adamorobe] the gong gong was beaten [to announce and spread some news]. [...] Did something get stolen? Did someone get killed? But that wasn't the case; the message was that deaf people cannot marry each other. [...] Ooohh we were stunned. Such a shame... [...] Everywhere the gong gong was rung: "Marry hearing, then hearing children are born, hearing are born, hearing are born. That is good, that is right. Deaf deaf deaf people everywhere, no that is not good." The gong gong was beaten...Such a shame...(regret).

(Kusters, 2012: 2765)

As a result, the population of deaf Adamorobians declined from 11% in 1961 to 1.1% in 2012 (a massive drop!), although it is still a comparatively high percentage as for instance, in Europe, the deafness amounts to only 0.1% of the total population (Kusters, 2012). The law seemed to be motivated by Adamorobe's reputation of being a "deaf village," a preposterous rumour that everyone in the village was deaf. The terminology is not only misleading, but it is also used in derogatory ways: anyone can be discriminated against for being from a "deaf village." Deafness has increasingly become stigmatized and seen as "inconvenience" to hearing villagers, who wished to distance themselves from the label "deaf village" (Kusters, 2015: 133). Although they still value the traditional ways of interacting and living with deaf people, they do not find the existence of deaf people and AdaAL as valuable in itself. On the other hand, deaf villagers feel marginalized and discriminated against, and torn between trying to fit in and resisting the law. Consequently, the cultural and linguistic diversity of Adamorobe is threatened (Kusters, 2015).

Furthermore, new generations in Adamorobe are increasingly switching to Ghanaian Sign Language (GSL), as more deaf children attend the boarding school where GSL is used. Between the marriage law, the influence of GSL, and later new migrations to Adamorobe, AdaSL and Adamorobe's deafness will likely disappear in the next few decades (Kusters, 2015).



Al-Sayyid Bedouin: a language is born

Al-Sayyid Bedouin Sign Language (ABSL) is indigenous to the Al-Sayyid Bedouin tribe, settled in the Negev desert of Israel and has unique properties of a new and still emerging language. It first emerged in the 1930s as a home sign, when four deaf siblings were born into a family of hearing parents and other hearing children. As the near-isolated society grew, the births of deaf children were increasing due to the recessive and non-syndromic genetic condition. About 75 years later, there were 130 deaf people in the population of about 4,000 people, amounting to approximately 3% of Al-Sayyid's population. Deafness is not stigmatized and deaf Al-Sayyidians are fully integrated members of their society. High approval of marriage among relatives, along with the recessive trait has created strong kinship ties between hearing and deaf people. Hearing people played a major role in the evolution and integration of ABSL, as they were among the first generations contributing to the development of the local sign system. The language rapidly developed and spread among the community members, and has reached the fourth generation of signers (Kisch, 2012; Wendy et. al., 2014).

ABSL exhibits variation (mainly in vocabulary) among households' sign systems, which can be referred to as familylects. Different signs for common nouns, e.g. CAT, DOG, and TOMATO, can be used across familylects. However, these varieties are mutually intelligible and the major part of their vocabulary and grammar is shared. In the process of SL emergence, especially in the case where hearing people had a substantial impact, one might assume that transfer from the spoken to sign language would occur. In the case of ABSL, some semantic transfer seems to appear in the early stages of the language, such as 'market day' and 'prayer day' for days of the week, but it has been attributed to "cultural influence" (Wendy et. al., 2014: 253). No evidence of creolization between Arabic and ABSL was found, as well as no influence of Arabic grammatical structures (Wendy et. al., 2014). Israeli Sign Language (ISL) on the other hand, is a central part of the Deaf community in Israel and as such is becoming "a marker of deaf sociality," the language used among young deaf people. For generations to come, ABSL might eventually become the means of communicating with hearing people only (Kisch, 2012).

In conclusion...

Rural sign languages evolve in isolation, which means they emerge independently and do not branch off or relate to another language (exceptions do exist, as, for instance, MVSL has been linked to the hypothesized Old Kentish SL). Therefore, these languages provide a unique opportunity of studying true language isolates, a phenomenon that is not as common among spoken languages. In addition, researchers have a chance to document a new language unravelling in real-time, how it is conventionalized and spread across its users.

Deaf signers of these small communities are particularly vulnerable to socio-economic and political inequities, which hearing signers may not recognize. Policymaking and schooling are powerful tools that are potentially destructive for rural SLs and their users but can also be beneficial if their aim is to work with and help the communities. Fieldwork and documentation of these endangered languages is an essential part of achieving their official recognition. Most importantly, to preserve any endangered language, younger generations need to acquire it from early on and have the impetus to continue using it.

[image 1]: https://commons.wikimedia.org/wiki/File:Dunroving_Ranch,_Chil-mark,_Martha%27s_Vineyard,_Mass_(70100).jpg

[image 2]: http://www.storyminemedia.com/adamorobe-sign-language-ghana/

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THE PHONEMES OF SIGN LANGUAGE



By Merel Koorn

his article will tell you more about phonemes and their connection to ' the five parameters of sign languages'. Don't worry if you have never heard about this concept before, because I will go into it in the following paragraphs. Firstly, I will talk about phonemes as I realize that, for some readers, your Phonetics and Transcription classes might have been too long ago to remember them (especially with all the other super interesting courses to follow, it is easy to have forgotten some information). After that, I will introduce a concept called 'the five parameters of sign language' and what they have to do with the phonemes of spoken languages. Namely, in some way, they serve as the 'phonemes' of signed languages. For me, it was very interesting to hear about these five parameters during my NGT (Sign Language of the Netherlands) classes and I hope that after reading this short article, you will become just as intrigued and enthusiastic about them as I am. I will try to provide videos with the signs I talk about so that you actually have the chance to see the sign. When watching the videos, please keep in mind that one-handed signs can be articulated with both the left and the right hand. The meaning of the word will not change depending on the hand.

So, as linguistic students, you have probably learned that spoken languages can be analysed through phonemes. Phonemes can be distinguished by their place and manner of articulation. So, for example, a consonant can both be a plosive (manner) and labial (place). whereas a vowel can be described as high (referring to the height of the jaw), spread (referring to the shape of the lips) and fronted (positioning of the tongue in the mouth). Moreover, phonemes can be voiced and voiceless. Voiceless consonants, like /s/, /f/, and / θ / are articulated without vibrating the vocal folds. During the production of voiced consonants, on the other hand, the vocal folds do vibrate. All properties mentioned thus far are used to distinguish the meaning of words. Minimal pairs are great tools to illustrate that. Take the words /phin/ and /phen/. In this example, it is the change in vowel phoneme that distinguishes the meanings of the words. Here, the change from /I/ to $/\varepsilon/$ is made by lowering the jaw during the production. Another example of a change in meaning caused by the change in phoneme would be $/t\varepsilon nt/$ vs. $/d\varepsilon nt/$. In this case, it is the voicing of the phoneme that determines the change in meaning.

In sign languages, instead of phonemes, we have different the so-called 'five parameters of sign languages'. Leaving out one of these parameters or producing an error whilst signing, results in the same effect as doing so for phonemes in spoken languages. You then either sign a non-existing word or another word you didn't mean to say. The five parameters are:

- 1 movement
- 2 location
- *3 handshape*
- 4 *orientation*
- 5 non-manuals

All five are equally important and should be used in combination with each other. And just as for spoken languages, in which different phonemes distinguish different meanings (/p^hm/ vs. /p^h ϵ m/), the five parameters of sign language also need to be changed in order to be able to produce words with different meanings. For example, for the articulation of the two-handed sign LES (lesson/class) one has to lift one of the arms to a horizontal position in neutral signing space and then has to tick with the other hand on the wrist of the horizontal arm while having the handshape 't'. The following video shows the production of the sign LES.



 [Throughout the article, click the underlined words to open the videos!] In order to change the meaning of this sign into another word, like COMPUTER, two of the five parameters need to be adjusted. This process is similar, for example, to the process of adding voicing to the phoneme /t/ to produce its voiced counterpart /d/ (like in the /tɛnt/ vs. /dɛnt/ example). So, as you can see in the following video, the man changes the word LES into COMPUTER by adjusting both the 't' handshape into the 'c' handshape and instead of the tick on the wrist, he moves back and forth over the underarm of the arm that is located in neutral signing space.



If the man had kept the same handshape and only changed the movement to that of COMPUTER, he would have signed a non-existing word, which might not have been understood as either LES or COMPUTER. This is because there is no sign in NGT that allows for that combination of the five parameters. This is similar to situations in which one accidentally mispronounces a word because the tongue wasn't placed on the right place of the mouth.

Nevertheless, there are signs that change in meaning when only one parameter is adjusted. Interestingly, these signs are the 'minimal pairs' of sign language! An example of such a pair would be DAG (day) vs. MONTH (maand). Although both signs are located on the head (with the same handshape, movement, orientation, and non-manual component), the change in meaning is caused by the slight difference in placement on the cheek. That is, DAG is signed with the finger next the mouth, and MONTH more closely to the eye.



Another example of a minimal pair in NGT would be OCHTEND (morning) vs. AVOND (night). After watching the following two videos, do you know what parameter is adjusted in order to distinguish the meaning of the words?



Indeed! In this example, the parameter changed is 'movement'. For the sign OCHTEND, the arm moves upwards and for AVOND downwards. Besides, something different worth mentioning is the iconicity of these signs. The movements of the arm refer to the rising and setting of the sun, in the morning and evening.

As you might have noticed, it is not always easy to spot which parameter is adjusted to articulate a different word. Just like the fact that it is not always easy to hear the difference between ϵ and k. Do you think between DAG and MAAND? And do you see which parameter is adjusted in the following videos that show STAD (city) and DORP (village)?



It is 'handshape'! In this particular example, as the difference in handshape is so subtle, it is also very handy to look at the mouthing of the signers during the production. Namely, they mouth the word as they sign it. Therefore, both the parameter 'handshape' and the mouthing of the word help distinguish meaning. Nevertheless, some signs are so similar, that it is only the non-manual component that changes in order for the meaning to be distinguished between the signs. Like for LAMP (lamp) vs. WIE (who).



However, during my Transcription of Sign Languages course, I learned that not all (sign) linguists acknowledge 'non-manuals', and therefore 'mouthing', as a salient parameter. With the result that they sometimes do not consider this parameter in their analysis of the sign language. That is also the reason that I am not completely sure if these last videos (lamp vs. wie) can be considered as a minimal pair. That is also why I didn't consider it as a distinguishing parameter in the STAD vs. DORP example. What do you think? Is this parameter just as salient as the others?

Now I would like to elaborate on the 'orientation' parameter. There is both 'palm orientation' and 'finger orientation'. The former refers to the direction in which the palm of the hand is orientated, whereas the latter to the direction of the fingers. There are signs for which both the palm and finger orientation are adjusted in order to change the meaning of the sign. Like for AVOND vs. VADER (father).



And sometimes, only one of the two variants of orientation is adjusted. That is the distinguishing factor in the production of ALS (suppose) vs. MAKKELIJK (easy). For changing the meaning, only the palm of the hand needs to be turned ninety degrees. That is, in the articulation of ALS, the palm is orientated to the side, and for MAKKELIJK to the body. I couldn't find a video of ALS but I did find a video of MAKKELIJK. If you would like to visualize the words, change the palm direction of MAKKELIJK into ALS so that your palm is orientated to the left when you are signing with your right hand and to the right when you are signing with your left hand. Please, if you try this, preserve all other parameters.



I hope that by writing this article you have learned some new interesting things about NGT and sign languages in general. Hopefully, I was able to rub off my enthusiasm about these beautiful and fascinating natural languages of the world. Furthermore, another thing I would like to inform you about is that on the 13th of October 2020 NGT has gained an official status as a minority language in The Netherlands! This must have been a great relief for the deaf and bad-hearing community of the country. Lastly, if after reading this you want to learn more NGT signs and/or more about how NGT and other sign languages are being transcribed, I highly recommend you to take a look at the Sign Language of the Netherlands minor on the UvA website!





The SIGN-HUB project

THE CULTURAL AND LINGUISTIC HERITAGE OF DEAF COMMUNITIES IN EUROPE information available via an on-line platform (www.-

By Roland Pfau

M ost sign languages are minority languages in the sense that they are typically immersed in an environment with a dominant spoken language – and indeed they share some features with minority spoken languages: they are often marginalized or even discriminated, they are not taught at schools, and their users may constitute a subculture within the mainstream culture. A peculiarity of sign languages is that they are non-written languages. The direct consequence of this fact is that sign language communities are prominently "oral" communities (Byrne 2016), which implies that their culture – including artistic expressions like storytelling and poetry – is transmitted "orally" (i.e., in a non-written, visual form) via sign language and has therefore, for the longest time, not been documented.

The SIGN-HUB project, a European project (2016–2020) funded within the Horizon 2020 Research and Innovation program (grant agreement #693349), constitutes the first systematic attempt (i) to document the history, culture, experiences, and languages of various European Deaf communities, and (ii) to make all of this

information available via an on-line platform (www.sign-hub.eu). The project involved a network of ten universities and research centers from seven different countries – France, Germany, Israel, Italy, the Netherlands, Spain, and Turkey – and it had four content components:

- *i* creation of digital sign language grammars;
- ii creation of an interactive digital atlas of linguistic structures of the world's sign languages (inspired by existing atlases for spoken languages like the World Atlas of Language Structures; Dryer & Haspelmath 2013);
- iii development of sign language assessment instruments, which evaluate comprehension and production of isolated signs and of full sentences, for use in clinical intervention and school settings;
- *i*∨ compilation of a digital archive of life narratives by elderly Deaf signers

The University of Amsterdam has been involved in project components (i) and (iv), and I myself have been the "task leader" for the life narratives part, which has been an extremely exciting – and at times challenging –

experience. In the following two sections, I therefore zoom in on these two aspects of the project (for details, see also Geraci et al. 2019; Pfau, Göksel & Hosemann 2021a).

Digital sign language grammars

In the course of SIGN-HUB, comprehensive (yet not exhaustive) grammars have been written for five sign languages (SLs): Catalan SL, German SL, Italian SL, SL of the Netherlands (Nederlandse Gebarentaal, NGT), and Turkish SL. A remarkable feature of these grammars is that they all follow the exact same structure, that is, a fixed table of contents that has been developed in a previous European project ("SignGram"), in which I had also been involved. This table of contents, a detailed (800 page) manual, and a glossary of linguistic terms together constitute the so-called SignGram Blueprint (Quer et al. 2017) – an open access resource available at doi.org/10.1515/9781501511806. The online grammars (will) contain numerous visuals (images and videos) and will be downloadable from the platform. Importantly, the platform is expandable in order to add sections to existing grammars as well as grammars of other sign languages in the future (following the structure of the Blueprint).¹

While most of the grammars have been written by teams including PhD students and (Deaf and hearing) senior researchers, in the Netherlands, the Descriptive Grammar of Sign Language of the Netherlands has actually been written, for the most part, by Ulrika Klomp – except for a few subsections that I co-authored with her



Figure 1. Two NGT signs which are (generally) accompanied by specific non-manual expressions.

(Klomp 2021). Besides parts on the phonology, morphology, and syntax of NGT, Ulrika composed a comprehensive part that details the socio-historical background of the language. Note that the Blueprint also features parts on the lexicon and pragmatics, but due to feasibility considerations, a decision had been taken to leave these parts empty (for now).

For the grammar, Ulrika first compiled close to everything that had been written to date on the history and grammar of NGT. Moreover, she conducted original research on domains of grammar that had not been investigated in detail before (e.g., conditional clauses and certain aspects of negation). Importantly, she also illustrates many of the phenomena at hand with naturalistic examples extracted from the Corpus NGT (Crasborn, Zwitserlood & Ros 2008) and/or with visuals she composed with the help of Marijke Scheffener, our deaf colleague (see, for instance, Figure 1, which illustrates the use of non-manual markers accompanying lexical signs). The result is an impressive 400-page book, which will shortly also be available open access on the website of LOT (https://www.lotpublications.nl/) and which, without doubt, will be a welcome source of information for everyone studying or interested in NGT, or sign language structure in general.

Life narratives of elderly Deaf signers

It probably transpires from the above that I am really excited about the UvA's contribution to the grammar component of the project. However, I have to admit – and Ulrika will forgive me for saying this – that I'm even more excited about the deliverables related to component (iv), the life stories of elderly Deaf signers.

The basis for this project component are interviews with elderly Deaf signers (age range 66–97) that were conducted by Deaf interviewers in Germany, Italy, the Netherlands, Spain, and Turkey. The interviews followed a pre-defined questionnaire, which was meant as a guideline to allow for comparison of stories regarding specific topics across countries. In total, 137 interviews were conducted, amounting to approximately 175 hours of material (see Cramer & Steinbach (2021) for details on the procedure; see Figure 2 for impressions from interviews). In the Netherlands, Annemieke van Kampen conducted 24 interviews with 26 interview partners. All interviews, as well as subtitled fragments, will be available on the project platform. Next to the interviews, project partners in France and Israel digitized pre-existing materials: three French documentary movies and a

¹At the moment of writing this text (January 2021), there are unfortunately still some technical problems regarding the platform, especially concerning the grammars and the atlas. It is hoped that these problems will soon be solved.

number of life stories from the Deaf archive of the University of Haifa.



Figure 2. Impressions from interviews: Italy (top) and the Netherlands (bottom).

Based on the interviews, as well as the materials from France and Israel, an important deliverable has been created: the 40-minute documentary We were there . . . We are here, an amazing and touching movie that is based entirely on memories of elderly Deaf signers, and thus offers an unprecedented and kaleidoscopic perspective on their experiences regarding family, education, work, war, and identity issues. The movie does not contain any spoken language as a voice over; it only features the signed accounts of signers from all participating countries, thematically organized into chapters, and with subtitles. Just like the interviews, the documentary is available on the project platform.²

A final output of the project, and one that I'm particularly proud of, is the edited volume Our lives – our stories: Life experiences of elderly Deaf people (Pfau, Göksel & Hosemann 2021b), published by De Gruyter Mouton on January 18th, 2021. The volume contains 13 chapters (400 pages), eight of which are written by project members and five by researchers from outside the

SIGN-HUB project; there are a total of 37 authors, 14 of whom are Deaf.

Together with Annemieke van Kampen and Menno Harterink, I contributed a chapter on the life experiences of elderly Deaf homosexuals in the Netherlands, focusing on their identity choices and changes from the perspective of intersectionality theory. Our interest in this topic was triggered by the fact that two of our interview partners – one female, one male – reported that they had distanced themselves from the Deaf community for a period of time in order to be able to come to terms with their sexual identity. In a sense, they were torn between their two identities and felt that they were forced to make a choice. This inner conflict is visualized in an impressive way by interviewee M19 by means of the metaphor shown in Figure 3, which depicts an imaginary rope around his neck being pulled to opposite sides.



Figure 3. Interviewee M19 expressing that he was torn between the hearing and the Deaf world by pulling an imaginary rope around his neck, first to his left (hearing world), then to his right (Deaf world).

An important part of our discussion relates to the history of Roze Gebaar ('Pink Sign'), the Dutch Association for Deaf LGBTIQ people, as it became clear from the interviews that this association has impacted the forming of Deaf Queer identities in the Netherlands in important ways. For me, co-authoring this chapter has been a wonderful experience, and a rather challenging one, as it forced me to step outside my comfort zone, i.e., the domain of linguistics, and to familiarize myself with aspects of Deaf identity and Deaf culture that were unfamiliar to me.

Taken together, the two project components that we addressed here will (i) help in exploring and valuing the identity and the cultural, historical, and linguistic assets of Deaf communities, and (ii) advance linguistic knowledge on the natural languages of the Deaf. In this way, the output of the SIGN-HUB project showcases and boosts that largely unknown part of our common heritage.

²There are versions with English subtitles, with subtitles in the local spoken languages (version with Dutch subtitles soon to be added), and with interpretation in International Sign. At the moment of writing, the movie can also still be viewed at: www.youtube.com/watch?v=1vB-Gw2S6ETg.

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DEAF IN THE LEGAL SYSTEM

By Jo-Anne van der Sluijs

The legal system uses a jargon that is specific to its field, with words and interactions that you would not encounter in your daily life (Coulthard et al., 2017). This makes a lawsuit hard to understand for a layman. However, there are groups of participants in the legal system for whom this specific jargon forms a larger obstacle than it is for an average adult. In this article, I will first explain briefly for a variety of groups why they face linguistic problems in this system. Then, I will elaborate on what problems the deaf community specifically encounters. Finally, a few tips will be given about how professionals in the legal system can improve the treatment of deaf people.

Linguistically vulnerable participants

There are various groups of people that are linguistically vulnerable in the legal system. For example, children form such a group, because they often do not understand complex sentence structures well (Coulthard et al., 2017) and they can be influenced more easily in the answers that they give (Gibbons, 2003). A second group consists of native minorities, who might have different norms and values in conversations compared to what is usual to the national legal system, which can lead to miscommunication (Gibbons, 2003). Individuals with an autism spectrum disorder often have problems with social interactions and communicating with others, which leads them to not always being able to understand

> conversations and (implicit) expectations in court (Copenhaver & Tewksbury, 2019). Furthermore, the illiterate are vulnerable, because they cannot decide on their own whether a written statement is true (Gibbons, 2003). People for whom the language of the legal system is a second language are possibly not familiar enough with the language to understand the complex use of it (Gibbons, 2003). As Gibbons (2003) describes, deaf individuals can also

be part of this group of second language speakers, even though not all deaf know the spoken language equally well as a second language. Often these people have a sign language as their first language, with which they communicate. This has a great impact, on various linguistic levels, on how they communicate and understand others in the legal system, as will be elaborated upon in the next paragraphs.

Problems Encountered by the Deaf

Even when communication happens by means of sign language, the first language of many deaf people, problems in understanding each other can still arise. Lundeberg and Breivik (2015) describe the Norwegian case of Lars, a deaf man with a mental health disorder, who did not agree to his mandatory hospitalization in a psychiatric institution. Sign language interpreters were present in this case, but they were not required to be specialised in interpreting in legal contexts (Lundeberg & Breivik, 2015). As Gibbons (2003) explains, the lexicon of a sign language often does not include words specific to the legal system, resulting in borrowing these words from the spoken language. When sign language interpreters are unaware of the exact meaning and implications of a concept, this can lead to semantic problems, because the meaning will not be clear either to the deaf person. Besides, the meaning of loan words is often hard to understand without any knowledge of the language from which these words are taken (Gibbons, 2003), which was also the case for Lars (Lundeberg & Breivik, 2015). Moreover, Lundeberg and Breivik (2015) describe how non-verbal communication cannot always be transferred well by a sign language interpreter, although these aspects are important to understanding an underlying meaning, i.e. the pragmatics, of a statement. Facial expressions of a speaker cannot be perceived by the deaf individual, when he or she is watching the sign language interpreter closely to follow and understand the conversation (Gibbons, 2003). These findings prove that even communication in the first language of the deaf does not always turn out well.

Apart from communicating via sign language, written notes can in some cases also be used when a deaf individual knows the written language as a second language (Myers, 1967). Nevertheless, some deaf people cannot express themselves in writing. This is the case of the witness in the case from DeWolf, which is described in Myers (1967, p. 26). Deaf people that can read the spoken language can still encounter problems on a syntactic level when reading legal documents. Language use in these texts is often complicated and sentences can be very extensive and long (Coulthard et al., 2017). Literate deaf can already have trouble with sentence structure in regular texts, which makes this an additional obstacle (Piñar et al., 2011). Deaf individuals that do not have any knowledge, or very little, of the spoken language as a second language, are often illiterate because the phonology of a sign language is hard to express in writing (Gibbons, 2003). Sign language phonology consists of various possible combinations of handshape, movement and position of the hand with respect to the body (Sandler, 2012). Communication by means of writing is thus not always possible.

Finally, there are many examples of deaf people who were unable to communicate after being arrested, which forms a problem on the phonetic level. McCue (2012) describes how a man decided to charge the police for this reason. Expressions in sign language are made via signs with the hands and when someone receives handcuffs upon arrest, a deaf person cannot 'talk' anymore (Gibbons, 2003). Gibbons (2003) also describes how movements of the hands, intending to say something, can even make it seem like the deaf person does not want to cooperate with the police. In this way, handcuffs can be much more limiting to a deaf person than for a hearing individual.

Improving Communication

In short, similarly to other vulnerable groups in the legal system, the deaf can encounter different linguistic impediments, because the language in the legal system is a second language for them and they mainly communicate via signs instead of sounds. Deaf people might not understand completely what is asked from them and may also not be able to communicate to the officers what they think. To prevent miscommunication in the future, I will now address a few tips that professionals could use when communicating with deaf participants. First of all, the deaf community would be helped significantly if sign language interpreters received specific training for interpreting in legal contexts, as is also described by Lundeberg and Breivik (2015). Moreover, police officers should watch out for signals that could indicate that the arrested individual is deaf, to avoid incorrect interpretations of behaviour and to have an interpreter as soon as possible on the spot. Finally, one should not assume that a deaf individual is able to understand written language, because this is, as it was described, not always the case. Therefore, deaf people should always have access to a sign language interpreter, in order to understand everything correctly. This would lead to a fair process for participants from the deaf community compared to hearing individuals.

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HOW THE SUMERIANS TAUGHT US TO READ

By Miki Bozhinoski

The beginnings

Behind the city of Uruk, whose walls were raised hundreds of years before the reign of the very first Egyptian pharaoh, lived the very successful culture of Sumer.^[1] The Sumerians lived on the banks of the Euphrates river and built aqueducts on it to expand the fertile area of their soil despite the dry climate of the region. With their newly established irrigation system, they could not only grow enough to feed everyone, but more importantly, they could also afford leftovers for the winter. These leftovers and any other resources were stored and distributed to the residents of Uruk. However, managing all of the resources of such a huge city is impossible without proper administration, and administration is impossible without some form of record-keeping.

To fulfil this need, the Sumerians decided to keep track of their supplies on clay tablets.^[2] First, at the top of their tablet, they would make a drawing of whatever resource they needed to count, for example, wheat. Then, for each established unit, let's say a basket of wheat, they would put a tally under the respective drawing. Through this new top-to-bottom tally system, nobody had to remember exactly how much food there was every time a new batch was brought into storage. In order to smudge-proof the information, it was also decided that tablets were to be turned 90 degrees during writing. This way, if you smudged the tablet while holding it with one or both hands, you would only erase less important parts of your record-keeping. At the same time, it enabled people to read how they usually do (i.e. top-to-bottom) by just rotating the tablet back up.¹

As a result of this system, people eventually learned how to read the symbols from left-to-right. Additionally, instead of laboriously drawing each thing that came into storage over and over again, the people of Uruk came upon an agreed set of symbols that were a simpler representation of everything that needed to be recorded. This resulted in another level of abstraction, where the drawings were not only turned to their side, but also simplified.



With time bringing in even more abstraction, it is easy to see how people stopped reading the symbols as representations of concepts, but as representations of the words for those concepts. For example, if Sumerians created a symbol of an eye, it could be used to represent the concept of sight and by action the action of seeing

¹*Keep in mind though that the definitive reason why people flipped the signs 90 degrees is unknown; this is just one hypothesis.*

or watching. However, they could reuse the same symbol to represent words that are the same or similar in sound. If we take the English pronunciation see /si:/ for this hypothetical, the eye-symbol could also represent the word sea, or even the pronoun she because it sounds close enough. Through this mechanism, the people of Uruk could now not only represent simple concrete concepts, but also complicated abstract ideas, almost like one big elaborate system of Rebus puzzles.



Two bee, oar knot two bee /tu bi ɔr nɒt tu bi/ (Source: Definition of "rebus", https://www.oxfordlearnersdictionaries.com/)

The spread

Thereby, the first writing system was born.^[3] Or, well, at least as far as we know. Eventually, this writing system, in many other forms, was used to represent way more languages than just Sumerian. When the Akkadians got their hands on it, they standardized the tool used to write the Sumerian script: a reed stylus with a triangular shape, which led to the wedge-shaped strokes of its later form. It was this tool that gave it the name we now use to refer to it: Cuneiform, literally wedge-shapes. It was in this form that it spread to other regions of the ancient Near East and was later used to represent many other languages, such as Old Persian and the Anatolian languages.^[3]



Clay tablet documenting the sale of a house (Source: "Cuneiform tablet: house sale contract, Quradum archive" The Met Museum, https://www.metmuseum.org/)

Cuneiform in this form continued its use for about 3000 years. It was only at around 200 AD that it was replaced by other alphabetic scripts. Despite its replacement, though, it might've left a bigger ripple into the origin of modern writing than you might think.

The legacy

Let's roll back again to the beginnings of Sumerian writing. It is at around this exact time when the linguistically innovative Uruk maintained high-level trade with Ancient Egypt. As frequent contact often causes, indirectly or not, the Egyptian and Sumerians engaged in a period of cultural exchange, which had a notable effect on things such as art, pottery, weaponry, and architecture. It is generally thought that during this period, the Sumerians brought in writing to the Egyptians.^[4] While the Sumerian script itself might not have directly been taken over by the Egyptians, they probably did adopt the concept of representing language directly using written characters, resulting in their hieroglyphic script. This is the exact script that everyone thinks of when they think about Egyptian writing: mysterious symbols carved onto the inner walls of pyramids depicting animals, jewelry and people with awkward posture. This innovation proved to be very important to the Egyptians for administrative, legal, mathematical, literary and religious texts.

Now let's fast-forward a little. First attested about a thousand years later, around the 19th century BC, the Egyptian hieroglyphic script was adapted to fit other languages, namely the Northwest Semitic languages of the Middle East.^[5] Named after the Sinai mountain of Egypt, their form of the script was known as Proto-Sinaitic, which later developed into the Phoenician script. It is this same script that was later taken over by the Greeks, Arameans and likely the people of ancient India, whose writing systems were eventually adapted to create most modern scripts: Latin, Cyrillic, Greek, Arabic, Hebrew, Devanagari, and even Tibetan and Mongolian.

The message

The people of Uruk and their Cuneiform are the reason you can read this article; and yet still, much of Cuneiform writing is unknown and untranslated: there are hundreds of thousands of clay tablets whose contents are a mystery to us. In fact, most people I know haven't even heard of it. There's a bright side though.

As of the time of this article, approximately half a million tablets have been unearthed and stored in museums. Due



Evolution of the Alphabet (Source: Matt Baker, https://usefulcharts.com/)

to the small number of specialists in the field, a very small amount of those are transcribed, and an even smaller amount are published. What I'm trying to allude is: if you're looking for a potential career choice, getting into cuneiform is probably not a bad idea. If you're interested in learning more about it, look up the videos of one Irving Finkel on YouTube: a British philologist and specialist in cuneiform. If you're more of the reader type, here are two fascinating books he has written as well:

BB

The Ark Before Noah by Irving Finkel *Cuneiform* by Irving Finkel and Jonathan Taylor

Happy reading, and I wish you good luck in your journey of discovering the oldest known writing system in the world!

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[5] Rollston, C. (2020). The Emergence of Alphabetic Scripts. In R.

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Editor's Note: The above is Akkadian cuneiform script for: "Katblad is cool" (the best example I could find ;))

(POP)- CULTURE!

Audism: terms used for forms of discrimination against people who are deaf and hard of hearing. *Example:* patronizing a deaf or hard of hearing person with the line, "you speak well for a deaf person"

"DEAF U" ON NETFLIX 🕨

Deaf U is a one-season documentary of students at Gallaudet University - a private university in Washington, DC, US that provides its deaf and hard of hearing students with a barrier-free higher education. The Netflix show touches upon relevant topics to deaf and hard of hearing communities, such as the deaf "elite", live interpretation, being deaf friendly, and deaf visibility. Deaf U also documents issues many of us likely can relate to like sexuality and social media presence, highlighting the specific social context of Gallaudet.



Source: https://images.app.goo.gl/fTt4B3WFkLknRy336



CHRISTINE SUN KIM

Christine Sun Kim is a marvelously talented sound artist and performer who famously signed the American National Anthem at the 2020 Super Bowl (read more about her confrontational and celebratory performance here, and watch it here). Besides this, her work as an artist challenges popular borders between music and deafness. Her piece soundings (shown here) visually demonstrates that, regardless of how many "piano"s and "pianissimo"s a composer uses to instruct an instrument to be played more softly, there is never silence. You can explore more of this deaf artist's incredible work on her website, or listen to her riveting TedTalk.



Source: http://christinesunkim.com/work/soundings/



Here's Deaf Star Wars Geek speak out! This guy is Deaf actor, Troy Kotsur and proud to see actor from Deaf community in Star WarsI Frank Rich, add him on your list to get autograph!



TUSKEN SIGN LANGUAGE

For a long time, Tusken Raiders of the many-beloved Star Wars series were regarded as barbarous sand people who speak a primitive language. This changed with the new Mandalorian series as it shed light on the intricate culture of the indigenous people of the Tatooine desert. To create a new sophisticated language that can be used as a means of commuting with Tuskens, Troy Kotsur, a Deaf actor, was invited to develop a unique sign language. In his interview with The Daily Moth, Kotsur said that his "goal was to avoid ASL" and that he "made sure it became Tusken Sign Language based on their culture and environment." Kotsur, who's been a fan of Star Wars from childhood, was hired not only as a Tusken Sign Language consultant but also for the role of a Tusken Raider (Weiss, 2020).

BSL ZONE

BSL ZONE

BSL Zone is an online platform, provided by the British Sign Language Broadcasting Trust (BSLBT), where you can watch a variety of TV programmes, as well as short films, all in British Sign Language! BSLBT is a young charity, funded by commercial broadcasters, the goal of which is to provide television programmes and online content made in BSL by Deaf people and for Deaf people. For those who don't know BSL, not to worry, most videos feature English subtitles. BSL Zone is also a great tool for those who are learning the language.

Check it out at www.bslzone.co.uk and watch your favourite shows via BSL Zone app, available for Android, Apple, and Kindle Fire!



BLACK AMERICAN SIGN LANGUAGE

In linguistics we often see that the social and political contexts push the speakers and signers of minority languages - and their communities - into the shadows. Such is the case for Black American Sign Language (BASL): a dialect (according to Wikipedia) of American Sign Language (ASL). The differences between ASL and BSL can be largely attributed to the many years of racial segregation in the United States where many institutions divided white and black deaf communities; including the deaf university Gallaudet (mentioned on this page!) which didn't accept students of colour until 1952. BASL is linguistically distinct from ASL with various syntactic, phonological and lexical differences. Signers of BASL also make use of a larger signing space and prefer two-handed signs to ASL's one-handed tendencies. As the well-known BASL advocate, Charmay, signed in an interview, "BASL got seasoning!"

is that BASL got seasoning!

Source: https://www.youtube.com/watch?v=3HDm3kx3rhY

▼ DEAF THEATRE



Deaf theatre is one of the

many channels through which Deaf culture is manifested. It is naturally a means of entertainment but also a way to express Deaf experiences. For hearing people, it is an opportunity to appreciate "the richness of visual life that is the gift of the Deaf experience" (Lane, et. al., 1996: 144). Deaf theatre can be traced back to the first Deaf schools. A lot of changes took place since then. An infamous event in Deaf history was the Milan Conference of 1880, which declared speech to be superior to sign and prohibited education in sign language. The elements of this destructive event are demonstrated in a revived version of the Broadway musical Spring Awakening. Produced by the Deaf West Theatre, this innovative play about adolescent sexual awakening in 1890s Germany is performed in ASL and English simultaneously. The musical is also able to capture the devastation brought to the Deaf communities by the Milan Conference, the repercussions of which are still seen today (Epstein, & Needham, 2015).

V SIGN LANGUAGE TV

Signlangtv is an online directory for television programmes in sign languages from around the world. It was launched in 2013 as a fully private initiative by a Polish researcher and web developer Sławomir Stępski in collaboration with a group of Deaf protesters. Today, the website provides information on 102 TV shows (20 are presented by the Deaf and the rest are interpreted), featuring a total of 51 sign languages. You can find all the necessary information and links to watch the programmes, as well as some extra information about Deaf presenters and interpreters. The project's goal, among others, is to encourage the use of sign languages, discussion of Deaf issues and employment of Deaf people on television.



18



A PUZZLE AT HAND: Acquiring a sign language

By Dr. Beyza Sümer

L anguage development in children seems to be a smooth progress, taking place effortlessly for them. However, it is still a big puzzle with a myriad of unanswered questions. What we know for sure is that there are many factors at play in this progress such as environment, genetics, cognition, etc. One factor, which has been largely ignored so far, is the role of language modality. Recent studies with sign language acquiring children, however, promise to make some interesting contributions to this puzzle.

When compared to spoken languages, the history of linguistic research (as well as language development studies) on sign languages is relatively short. The main goal of the earlier line of studies on sign languages was to seek out the similarities with spoken languages to show that sign languages are natural languages just like spoken languages. In fact, accumulating body of evidence over the years has shown that sign languages are undoubtedly on par with spoken languages both in terms of their linguistic structure (e.g., Sandler & Lillo-Martin, 2006) as well as their processing in the brain (e.g., Emmorey & Özyürek, 2014). Further evidence has also emerged in the studies with children acquiring a sign language since birth, who follow similar patterns of language development in general as children acquiring a spoken language (e.g., Morgan & Woll, 2002).

Despite the similarities between sign and spoken languages, as revealed by ample research so far, the modality difference between them cannot escape one's notice: Sign languages operate on visual-spatial modality while spoken languages on auditory-vocal one. The visual-spatial modality has certain consequences for the linguistic organization of sign languages, one of them being the prevalence of iconic forms. This, in fact,

challenges Saussure's idea of "arbitrariness as being an essential feature of linguistic signal" (de Saussure, 1983). Iconicity in linguistic forms simply refers to a (mostly visually) motivated link between a linguistic form and its referent (e.g., Perniss, Thompson, & Vigliocco, 2010) and can be observed not only at the lexical level but also beyond it (e.g., morphology, syntax). If you take a look at the below examples from Turkish Sign Language (Türk İşaret Dili, TİD), you will notice how the shape of the hands represent the actual shape of its referent (namely "bed") in Figure 1, and how the location of the signers' hands with respect to each other encodes the spatial relation between pen and paper in Figure 2 and 3.



Figure 1



Figure 2

Figure 3

By considering the iconicity in such linguistic forms, it might be intriguing to ask whether signing children acquire such linguistic expressions earlier than their speaking peers, who need to figure out the arbitrary link between form and meaning. In my research, together with my collaborators from different universities in the Netherlands, Turkey, Germany, and the UK, I mainly seek answers to this question by focusing on different linguistic domains both in sign and spoken languages. Here is the spoiler alert: The answer is "yes" – well mostly!

While acquiring lexical signs, signing children benefit from the iconic properties of these signs. Studying the production of 500 signs in TİD by deaf children (8-42 months of age), we found that the more iconic a sign is, the earlier it is acquired by signing children (Sümer, Grabitz, & Küntay, 2017) – a finding being replicated in other sign languages, as well (Thompson, Vinson, Woll, & Vigliocco, 2012 for British Sign Language, BSL; Caselli & Pyers, 2017 for American Sign Language, ASL). One might think that such an iconicity effect might be limited to the acquisition of lexical signs, but do not extend to the acquisition of other linguistic forms. In a series of studies, we pursued iconicity effects in the expression of spatial relations, for which sign languages employ highly iconic structures as shown in Figures 2 and 3 above. Despite their iconicity, these are morphology complex forms, which require the use of correct handshape for the entities (so no round handshape for pen), as well as the coordination of both hands simultaneously. Please note that these forms are also preceded by the lexical signs for the entities (namely for paper and pen in these specific examples, not shown in the Figures). So, it is also possible that the acquisition of these forms by signing children will be challenging due to these morphological complexities.

Our findings were pointing towards quite a complex role of iconicity in learning to encode spatial relations: For certain spatial relations (such as "on" as in Figure 2), there

was no effect, thus signing and speaking were similar in when they learn to produce them (Sümer & Özyürek, 2020). However, for some other spatial relations, namely "left/right", notoriously difficult to be acquired by speaking children (e.g., Johnston & Slobin, 1979), (TİD) signing children could produce them even at the age of 4 years while (Turkish) speaking children were being challenged at the age of 9 years, thus suggesting a facilitating effect of iconicity (Sümer, 2015). Comparison of these spatial descriptions further showed that signing children were more specific and clearer in their use of linguistic forms than their speaking peers, who most of the time used ambiguous spatial terms (Karadöller, Sümer, Ünal, & Özyürek, under review). When we studied more extended discourse such as event narrations of signing and speaking children (aged 4-9 years), we did not observe differences between two groups, thus suggesting a neutral role of iconicity (Sümer, 2016; Sümer & Özyürek, under review).

In a nutshell, signing and speaking children are usually similar to each other in their acquisition of several linguistic domains. When there is a difference, it seems to be for the benefit of signing children. These findings highlight the complex nature of language development and intricate relations among several factors (including language modality) influencing language development. Studies with sign language acquiring children obviously provide some of the missing pieces of the puzzle that we have at hand, but also paves the way for more questions to be pursued.

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SIGN LANGUAGE ACROSS BORDERS Andrea and her colleagues have been pioneers the field of deaf assessment and education for refug

Interview and article by Britt Daize

As humans, each of our linguistic backgrounds are a distinct part of us; we are unique in our language proficiencies, our acquisition of these languages, and how we employ our languages in our daily lives. If you are familiar with any deaf communities, you will already know that the variability between individual language background is remarkable. The age of onset of deafness, the learning resources available, the social support, and degree of medical intervention are just some of the factors influencing the linguistic features of people who are deaf or hard of hearing. In recognizing this, however, it is important to remember that our language paths are not laid out in isolation but are intertwined in the socio-cultural world with which we interact.

With this in mind, I wished to investigate the experiences of a particular minority within deaf communities in the Netherlands; refugees who are deaf or hard of hearing. Perhaps this can contribute to giving the heterogeneous group of deaf and hard of hearing refugee children, adolescents, and adults more visibility. To paint a more nuanced picture of how deaf refugees are accommodated upon arrival in the Netherlands, I had the pleasure of speaking with Andrea Hubbers who works directly with refugees who are deaf or hard of hearing. To start off, I asked Andrea for a quick introduction to her professional background.

ANDREA HUBBERS: I started working at Kentalis as a speech and language therapist, and I think after about 10 years, I got a contract as a [sign language] linguist as well. So, I have some added work and I mainly focus on improving diagnostics, healthcare, and education for deaf refugees. At the moment, we have a collaboration called Deelkracht ("the power of sharing"). So, we work together with different organizations that provide diagnostics, healthcare, education to deaf people, or people who are Hard of hearing or have a language impairment. So different target groups but I work for the Deaf and Hard of Hearing refugee projects. Andrea and her colleagues have been pioneers in the field of deaf assessment and education for refugees coming to Europe since the influx of asylum seekers in 2016. Under the umbrella of Deelkracht, Andres' team also works alongside other specialist organizations in auditory and communicative limitations, involving knowledge- and experience-sharing with researchers across the EU. The first project aimed at bettering the situation of deaf refugees focussed exclusively on children and adolescents:

AH: We worked for 2 years on trying to improve diagnostic, health, and education services for [these children]. The children and youngster project was done together with an organization called Save the Children which was all over Europe. They interviewed young children, adolescents, and their parents to see where they had come from, how their journey to the Netherlands had been, what kind of health services they were provided with, what kind of language input, what kind of education, and what would they want? ... If we asked them to teach us, what can we do better?

Andrea's work focussed primarily on assessing the education and healthcare required by these children. Based on this, teaching materials were developed. Throughout the project, Andrea noted the progress that she and her team has witnessed:

AH: We already see an improvement in the time that they are referred to us. So, for me, that's already a big difference. ... Three to five years ago, I saw [the deaf refugee children] when they would drop out of school in the Netherlands. They wouldn't fit in or couldn't cope with the speed or the level they were supposed to be in and when it went wrong, I would see them. ... My colleagues and I wished we could see them earlier. Now since we've shared the research and there's quite a bit of material, we see that gradually, people become more aware that we are here and that we can help and what kind of questions they can ask that we can help them with. So now, for instance, when they're still at the refugee center they are referred to us. Sometimes even before they go to school, just to see which level and which place will fit them best.

The children that Andrea and her team worked with come from countries in the Middle East. She noted that children from Syria had especially heterogeneous backgrounds, with some having attended deaf school where they were provided with sign language or hearing aids and oral input, sometimes even both. Children from other countries tended to have only been taught home sign as a means of communication. Regardless, one commonality was their deprivation of language input and education.

AH: From the educational point of view, they have fallen behind enormously. Some of them have been in class, but just sat and copied things from the blackboard having no idea about what they were writing down. So, some can read and write technically,



but they have no idea what they're reading or what they're saying. ... They have some knowledge and some experience, but it's not a lot and also the things they can communicate about are quite limited.

Now that this project has concluded, the linguists at Kentalis are currently one year into a similar mission for deaf adults with a refugee background. Andrea pointed out that this group presents very different challenges; if they are over 20, it is no longer possible for refugees to attend public school. Often, this group will go into vocational training with an entrance education where they can learn Dutch and/or Sign Language of the Netherlands (NGT), how to read and how to write. This generally takes one to two years, but for some, this is not feasible due to the difference between their language skills and that of those around them. Moreover, institutions offering vocational education are often not equipped to provide these students with the adjusted timeframe, linguistic input, and educational materials they need. Before this, however, refugees are interviewed and given a multi-lingual assessment, which can take place while they are still at the Centre for Refugees (AZC) or after they have been granted status:

AH: The interview is quite long because we need to know more about their background. We do multi-linqual research with them to see what languages they can use, spoken, written, and of course, signed. Also, if they were not offered sign language before they came, we try to see how quickly they learn; what kind of information do they get from [sign language input]? Usually, there are quite a lot of grammatical markers that they can understand because they're deaf and used to visual information.

We get quite some time to do this research and we can do a dynamic assessment; we try to give them some input and see how quickly they learn if we support with signs or support with written materials or Arabic written words; how does it help them? So, we can treat them already while doing research.

> On October 13th of 2020, Nederlandse Gebarentaal (Sign Language of the Netherwas granted official lands) language status, finally taking its place beside Dutch and Frisian (De Meulder, 2020). I was curious whether this recent landmark had had an impact on the project.

AH: Not yet, but we hope so. The best case would be that the refugees can inburgeren (integrate civically) in Dutch Sign Language. And instead of Dutch culture, they can also answer questions on Dutch Deaf culture. I would very much hope that sometime in the future this would be the case, but we're not there yet, no. But we are happy that it's official now!

While all progress takes time and patience, it also requires the tireless, dedicated work of linguists like Andrea and her colleagues, as well as the recognition of the tremendous hurdles that deaf and hard of hearing refugees face. The positive changes in recent years in the accessibility of language assessments and treatments for these refugees – children and adults alike – is inspiring. To date, numerous people with refugee backgrounds have been supported through this initiative, including 60 children and adolescents.

After my conversation with Andrea had finished, her commitment energized me to believe that there will continue to be progress towards refugees' supported integration into Dutch deaf culture. NGT's officialization is a significant and overdue step. However, seeing the efforts of Kentalis and other people and organizations involved makes the future for those with a refugee background who are deaf or hard of hearing much brighter.



Learn more about the organization at https://www.kentalis.nl/

Metuder, M., 2020. Available at: https://maartjedemeulder.be/2020/10/13/sign-language-of-the-netherlands/#~-text =This%20aftermoon%2C%20the%20Senate%20of,next%20to%20Dutch%20and% 20Frisian

De Meulder, M., 2020. It's here, at last! Legal recognition of Sign Language of the

CURRENT RESEARCHAT THE UVA

BILINGUAL ORDINAL ACQUISITION

Research by Dr. Caitlin Meyer, Heleen de Vries, Merel Koorn, Lizzie Oakey Written by Lizzie Oakey

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How do bilingual children acquire numbers? ,,

While we may say that things are 'as easy as one, two, three', it would seem as though 'one, two, three' itself is not easy. However, children learn numbers as successfully as they learn language, that is to say very well. This research project aims to investigate how bilingual children acquire their ordinal numbers, such as first, second, and third. There are not many studies looking into ordinal acquisition but it provides the opportunity to understand how regularity affects the learning of linguistic rules, and how language helps us understand concepts.

Literature looking into numeral acquisition has focused so far on cardinal number words acquisition and has found a clear pattern of acquisition that seems to be followed by many languages. At around the age of two, when children can recite count lists without understanding them, the first stage of acquiring the conceptual meaning of numbers begins. The numbers one to four are acquired in a step-by-step manner. One by one, each number's precise meaning is understood. When children are around four years of age and have acquired the first four numbers individually, the second stage occurs. This is when they are able to map the precise meaning of numbers onto the already known numbers that were able to recite at two years of age all in one go. This pattern is found in multiple languages, however, the rate at which children go through the different stages may differ from language to language (Meyer, 2019).

The process of cardinal acquisition described here also applies to bilingual children. However, Wagner

et al. (2015) suggest that, at a certain stage, bilingual children will share their conceptual knowledge of numbers between their languages. This is not the case when bilingual children are acquiring the numbers one to four. This means that a child may know the numbers one to three in their L1, but only the numbers one and two in their L2. However, this does seem to be the case when bilingual children have reached stage two, meaning that cross linguistic influence can occur. This is relevant to the bilingual aspect of our study.

Regarding the ordinal aspect, few researchers have focused on ordinal numbers' acquisition (Colomé & Noël, 2012; Fischer & Beckey, 1990; Meyer, 2019; Miller et al., 2000; Trabandt et al., 2015; de Vries et al. 2020) and, as far as we are aware, no-one has yet investigated bilingual ordinal acquisition. What is currently known of ordinal acquisition is that ordinals are based both linguistically and conceptually on cardinals. That is why understanding cardinals and their acquisition is necessary for this question. Furthermore, how obvious this relationship is affects the process of acquisition. Some languages have a transparent formation rule, and children acquire an understanding of ordinals through an understanding of this formation rule. In Chinese the ordinal is formed by adding the prefix di to a cardinal and there are no exceptions to this rule (Miller et al., 2000). Other languages' ordinal formation rule is opaque. Therefore, during the initial acquisition process, children cannot use the rule to derive the meaning of ordinals. This occurs in Russian, which has many irregular ordinal numbers. In fact, out of the first ten ordinals in Russian, only four are regular (de Vries et al., 2020). The transparency of the rule also affects the rate at which children acquire ordinals across different languages, so the more transparent a rule is, the faster it is recognized and learned.

Another important point for our study is that acquisition of ordinals starts at around four years of age, when children are either understanding the meaning of four or of all their known numbers after that. This means that bilingual children are around the age when their conceptual representations of cardinal numbers are shared across languages. This means that ordinal acquisition could be affected by cross-linguistic influence. Linguists do not agree on how cross-linguistic influence occurs. Some researchers believe that it goes from a child's dominant language to his or her non-dominant language and others believe that, in the context of a rule such as this, the influence goes from the transparent language to the opaque language as a coping mechanism for the ambiguity of the opaque language (Müller, 1998). Due to the importance of the type of ordinal formation rule in our study, we will be looking at Dutch-English bilinguals. They are both relatively transparent rules, however, English acquisition of ordinals occurs more slowly than that of Dutch as it contains more irregular ordinals and is, therefore, more opaque. Therefore, in our study, we will be investigating bilingual ordinal acquisition in order to determine whether bilingual speakers of Dutch and English acquire ordinal numbers in a similar way to their monolingual peers.

If you are interested in hearing more about this research, do not hesitate to get in touch (lizzie.oakey@student.uva.nl) as Merel and I (Lizzie) are currently unable to continue with this research project. This means that, if this caught your eye, you could very well pick it up and keep the research going!



By Domonkos Király

This article is partly based on a video essay by Mark Brown, available on his YouTube channel called Game Makers' Toolkit. I highly recommend checking it out, so do not hesitate to click the link below, and if you're interested in the ins and outs of game design, why not give his other videos a watch?

Get inspired: https://www.youtube.com/watch?v=4NGe4dzlukc

Video games are for everyone. There should be no question about that. And yet, millions of people who live with varying degrees of hearing loss may find themselves a bit left out, to say the least, when trying to enjoy a game - whether it's a recent blockbuster, an online multiplayer, or some niche under-the-radar indie title. It is the nature of video games to have the player rely on not just visual but also audio cues to tell them what's being said in-game or in a cutscene, what's going on off-screen, when an ability is ready to be used, and many many more. And I know what you're thinking: that this is easily fixed using subti-

tles. In the age of the streaming service, platforms such as Netflix have extensive guidelines in place to ensure that subtitles are as easy as possible to read. Just to name a few of Netflix's rules, they fix the minimum and maximum duration of a single subtitle event, there can't be more than 2 lines on the screen at the same time, even the line breaks have to happen at prescribed locations, and so on and so forth. Despite all this, TV and cinema still leave a lot to be desired in terms of accessibility for Deaf and Hard-of-hearing audiences. But I'm not here to tell you about that. In the following, I will show how the



These subtitles are too small, there is too much text at once and the font doesn't stand out enough from the background

Source: https://www.youtube.com/watch?v=GLgXS77wk0w&t=28s

video game industry manages to do even worse when it comes to captions, but more importantly, list some solutions to these problems. Take a look at the example above.

The game industry's subtitle problem

It's clear from the first glance that these captions are less than ideal. The font size is too small, there is too much text on screen, even the white colour is problematic: it blends in with the background, making it difficult to read. In cutscenes such as this one (right before the infamous racing section in Mafia Remake), players should not be frantically skimming an entire paragraph of dense text, but rather following the flow of the conversation at a natural pace, ideally a couple of lines at a time. Here, at least the speaker's name is displayed, which is a seemingly obvious feature that is sadly often overlooked. Also, while it might not be the end of the world to have bad subtitles in a non-interactive cutscene, like in the Mafia example, where players aren't required to do anything other than reading, but it's an entirely different story in-game. Imagine trying to read all of that in the heat of combat or during a tricky platforming section! Luckily, there are some big publisher-developers who provide positive examples. Ubisoft, for instance, has released many influential titles with good subtitle options.



Ubisoft's Assassin's Creed Valhalla and its predecessors have a good level of customisability in terms of its subtitles

Source: https://ubisoft--c.na123.content.force.com/servlet/servlet.ImageServer?id=0150M000003tx4VQAQ&oid=00D30000001aepTEAQ

In the latest Assassin's Creed games, players can choose the size of the captions, whether they want to have the speaker's name on screen or a dark background that makes the text stand out and easy to read. Good subtitles come in clear, sans-serif fonts of adjustable size, or, even better, with the option of having a dyslexic font. All in all, the best solution is to let players customise their experience.

What should be transcribed?

The possibilities for increasing accessibility don't stop here though. The content of subtitles is not as straightforward as it might seem at first. It may come as a surprise that very few games actually have subtitles for ALL dialogue. Main characters and important conversations aside, non-player characters (NPCs) such as enemies or minor characters also have voice lines that contain important information, for example, in shooters, enemies

often shout to let you know that they're reloading, throwing a grenade, sounding the alarm etc. It is a serious design flaw if some players don't get this information. Providing captions for NPC barks is just as important as having them for cutscenes. And it's not just voice lines that need to be transcribed for those who cannot hear game audio: imagine you're playing an action-adventure role-playing game. You've just started, so your gear isn't very good, you're inexperienced in combat, but nevertheless, you venture into a cave in hope of

some good early loot. If you then hear the roar of some ancient dragon in the deep, you'd probably just leg it as quick as you can and avoid a fiery game-over. It's a different situation when you don't hear the dragon and there is no visual information to tell you about the looming danger. For a real-life example, Hitman players can quickly find themselves in serious trouble if they don't hear security guards announce that the area behind them is off-limits. These cases serve as an illustration of the need for providing captions or other visual representations for auditory events that happen on- or off-screen. Ideally, they contain the type of the sound and its source direction, like in Fortnite, where players can turn on a ring of icons around their character, representing sounds as they happen. There is a caveat to this: no-one should gain an unfair advantage over others in multiplayer games, so the only way to implement this feature is to have it on for everyone or lose it completely. But also keep in mind that



A guard warns Agent 47 that he's about to enter a restricted area. This cue is not subtitled. Miss the guard's gesture and you're in some serious trouble!

Source: https://www.youtube.com/watch?v=qhLfisI0dNc

without them, deaf or hard-of-hearing players may find the game significantly harder or impossible to play. Even in this day and age, the subtitle problem for games is still waiting to be uniformly resolved, but http://gameaccessibilityguidelines.com/ is a

good place to start. Their suggestion for closed captions is to be found under the Hear-

ing category and is formulated as: "Ensure that subtitles/captions are cut down to and presented at an appropriate words-per-minute for the target age-group". This initiative has been around since 2012 and is an effort to homogenise accessibility features and provide options for developers who want to reach a wider audience, becoming generally more inclusive. In the years to come, the slow increase in accessibility will hopefully continue and accelerate, but for that to happen, big publishing houses need to step up and act as an example for everyone else to follow.

LOADING..

Sign languages in games

Providing subtitles is unquestionably the easiest and most popular way to accommodate gamers who are deaf or hard-of-hearing. But what if developers took it a step further and included sign languages in their games? Signs are rarely seen in video games, despite being listed as an advanced option (right under the one about subtitles) by Game Accessibility Guidelines, but in the rare cases where they are, it is mostly done for aesthetic reasons or, rather weirdly, to give a character a unique "twist". An example of this can be found in 2017's Tacoma, a story-heavy puzzle game where players uncover the secrets of Tacoma, an abandoned space station. When interacting with doors or data points, the main character will often use American Sign Language to fingerspell her name and passcode or to express commands. Mind you, this is not an effort to make the game more accessible to signers, but still, it's a nice way of representing the ASL community.



▲ Tacoma's protagonist Amy Ferrier uses ASL signs & fingerspelling to open doors and recover data Source: https://www.youtube.com/watch?v=eEUyzMsH15A

When it comes to representation, however, no game or character does this better than Insomniac's most recent Spider-Man: Miles Morales' titular character, released in 2020. At the start of a side mission called We've Got a Lead, Miles has a nice chat with an ASL signer, Hailey, who helps him track down a group of crims, you know, the usual superhero stuff. The cutscene in which a perfectly average teenage girl and actual Spider-Man chat leisurely using beautifully animated sign language, complete with non-manuals and everything, is truly something to behold. So in addition to already being the ultimate good-guy protagonist, Miles Morales turns out to be a signer of ASL, making this title a video game event that is and continues to be celebrated among the ASL community and on online forums such as Reddit. Rightly so. Last but not least, I'd like to introduce the character who gave me the idea of writing this piece in the first place. Meet Quill, who rightfully holds the title of gaming's favourite VR mouse.

She is the protagonist of the 2017 PlayStation VR game Moss, an exploration-based platforming puzzle game that takes place in virtual reality, without a single line of spoken dialogue. I say there's no spoken dialogue, but what I really mean is that Quill, being a mouse and all, can only squeak, so unless you're fluent in rodent, you're not going to understand what she's trying to communicate. Luckily, animation director Richard Lico had the idea of adding sign language to Quill's communicative repertoire, so players don't have to rely on

high-pitched mouse noises to find their way around the level. Again, as in the case of Tacoma, the motivation behind this was mostly aesthetic, but I like to think about it differently. If you're going to spend hours with this character, or in fact any signer-character, why not learn a little bit about sign languages or Deaf/HoH culture along the way?

🔻 Not only is he a literal superhero, Spider-Man also knows American Sign Language



Source:https://www.youtube.com/watch?v=T08H5VGSqXI

THE ONE-INCH BARRIER:

The (in)accessibility of media for hard-of-hearing/deaf individuals

By Aemun Ahmad

In January 2021, Universal Pictures made a few classic horror films available on YouTube, and since one of my favourite pastimes is watching movies, I seized the opportunity to see titles such as Dracula (1931) and The Mummy (1932) for the first time. To my surprise, I realised that these movies had no proper captioning available, making them very difficult for some to understand properly. Though this issue may seem small and insignificant, it indicates a much larger one at hand pertaining to the limited accessibility of media for individuals with hearing loss.

As a hard-of-hearing individual, I heavily rely on subtitles to help me understand what is being said in a movie or show. I am certain I am not the only one, for over 5% of the world's population has some form of hearing loss^[1], and a large number of us consume media regularly, just as people without hearing loss do.

Unfortunately, the accessibility of media for people with hearing loss leaves much to be desired. Research conducted by the National Deaf Children's Society (2019) indicates that seven out of 10 cinemas in the UK did not provide subtitled screenings for popular children's movies in the summer of 2019^[2]. Around 50.000 children in the UK are deaf^[3], and by failing to provide subtitles, these cinemas effectively excluded a large proportion of potential viewers from being able to enjoy these movies on the big screen, like the rest of the population.

However, this issue does not only arise in cinemas. Even multi-billion-dollar companies, such as Netflix, Amazon Prime and the aforementioned YouTube, often fail to provide a seamless, hassle-free experience for the multitude of viewers who rely on captions. Due to COVID-19, the usage of these streaming services has exploded as those stuck at home rely on them for their daily source of entertainment, yet there are multiple issues with how these companies make their services accessible for hard-of-hearing (HOH)/Deaf individuals.

Take Netflix, for example, a company that offers only a few subtitles in languages that are determined by your current location. For the hit series Stranger Things, Netflix Netherlands offers subtitles in English, Dutch, French, Spanish and German. When asking a friend who is situated in Aruba what subtitles were available there, they could only choose between English, Spanish and Dutch. So for instance, were a French speaker with hearing loss to be situated in Aruba, they would not be able to watch this show due to limited accessibility unless they utilised a VPN. This example also illustrates how this issue of the lack of accessibility, is particularly disadvantageous to those whose native language is not English or a western language. For fully hearing speakers, understanding media not available in your native language is hard enough, but it is particularly hard for people with hearing loss, who can neither hear properly nor read the subtitles due to their unavailability in their native language.



Another example is how companies such as Netflix and Amazon Prime display their subtitles. Far too often, a situation occurs where captions are displayed on already available subtitles, making them difficult to read. This can lead to the dialogue being missed, as illustrated in the image, a screenshot of Amazon Prime, below from Twitter User @UntoNuggan: The removal of this feature clearly only made the platform harder to use for viewers and creators alike, and personally, I found myself using YouTube less after this feature was removed as I found it difficult to watch videos without captions, and many creators have not been adding them manually/before uploading their videos.^[4]



streaming services, I also see this issue occur when it to screeners comes of movies. At the beginning of January 2021, I attended a free early online screening of Malcolm & Marie, which was released worldwide in early February. This screener had no subtitles, and due to this film being 95% dialogue, I missed pretty much everything the characters had to say. This meant I had to re-watch the film on Netflix upon official release

Besides cinema's and

As mentioned before, YouTube also has its problems with making content accessible for their hard-of-hearing/Deaf viewers. In the summer of 2020, the company announced that it was removing the community captions feature which allowed viewers to add subtitles to videos. This sparked a wave of outrage, with many HOH and Deaf creators saying that removing this would only make the platform less accessible. Additionally, many creators relied on their viewers to add subtitles in foreign languages so their content would be accessible to those who don't speak English.

The Deaf YouTuber, @rikkipoynter on Twitter, summed it up perfectly:

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I told them for a full freakin' hour why we need community contribution. Not just for deaf people so more channels will have captions, but for disabled creators who can't manually do them or have the income to pay for them: which is most of us. They do not care about us.

"

to know what it was even about. This was understandably frustrating and I can only imagine that if I had paid money for this screener, I would not have received a quality experience due to a lack of subtitles, and my money and time would have gone to waste.

This all brings us to the following point: how can companies and cinemas make their platforms and viewings accessible for those with hearing loss? The implementation of subtitles is one of the key things they can do, as this is beneficial for most people with hearing loss. Cinemas should ideally offer subtitles at every viewing, but if that is not possible then the number of viewings that have subtitles should occur more often and during reasonable times, as many subtitled screenings occur very late at night. Another option is to use sign language interpreters. This can help those who use sign language as their primary source of communication.

These days, many action films have background sounds that completely overshadow dialogue in a movie. An example is Tenet. I saw this in IMAX and if it were not for the provided subtitles, I would have missed half the dialogue in the movie, as it was

https://twitter.com/rikkipoynter/status/1289004897371856898

drowned out by the loud background sounds. Filmmakers, but also distributing companies, should take responsibility to ensure their movies are understandable. A way this can be achieved is by isolating the background sound in post-production or offering a nullified sound version of the movie. This is especially beneficial for those whose hearing problems stem from cognitive disorders, as they can understand what is being said at their pace.

Streaming companies and cinemas should also hire more hard-of-hearing or Deaf individuals. You cannot solve an issue without consulting the people you are trying to make content more accessible for. Our experiences are unique, and only by consulting us and gaining insight on how we believe your companies can become more accessible, can you actually provide a quality viewing experience for those who are hard-of-hearing or deaf.

In this day and age, it is not impossible for these billion-dollar companies and cinemas to provide content that is accessible for all viewers. In fact, their reluctancy to do so, such as YouTube and their removal of community captions, gives us insight into how common audism (discrimination against hard-of-hearing or Deaf individuals) is and how inaccessible certain things are for individuals with hearing loss. Millions pay monthly fees to streaming sites or double that for a ticket to the cinema, including hard-of-hearing and Deaf people, and their experience shouldn't be limited due to a lack of (proper) subtitles or other options that enhance accessibility. If free illegal streaming sites are able to implement subtitles properly, then these companies should too, and it should be expected of them to provide a viewing experience that everyone can benefit from, not only the people who can hear properly.

The title of this piece refers to a quote by Bong Joon-Ho, an acclaimed South Korean filmmaker:

"

Once you overcome the one-inch-tall barrier of subtitles, you will be introduced to so many more amazing films.

While his comments were aimed at those who refuse to watch foreign films because of their disdain for subtitles, I feel that the first part of this quote can also be used for those who refuse to implement subtitles in cinemas for example, where some cinema-goers complain that the implementation of subtitles comes at the cost of the aesthetic of the movie. It is unlikely that subtitles will ruin any aesthetic, but they will make movies more accessible for those with hearing loss. Because after all, we also just want to enjoy a film on the big screen once in a while too, and it should not be seen as unreasonable of us to ask that there are subtitles provided. In the end, not only people with hearing loss benefit from subtitles, but rather it has been proven that everyone does ^[5]. It's a win-win situation.

[1] - https://www.who.int/news-room/facts-in-pictures/detail/deafness

[2] - https://www.theguardian.com/society/2019/sep/12/deaf-children-failed-by-cinemas-lack-of-subtitled-screenings

[3] - https://rnid.org.uk/about-us/research-and-policy/facts-and-figures/

[4] - https://www.theverge.com/2020/7/31/21349401/youtube-community-captions-deaf-creators-accessibility-google

[5] - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5214590/

