Universal Design and Communication Rights: Meeting the Challenge of Linguistic and Communicative Diversity

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Abstract. This essay discusses Universal Design (UD) with respect to language and communication rights. Because Universal Design approaches aim at meeting human variability from the get-go, they must be able to address linguistic and communicative variability. Variability must individual variation in language functions and communication activities in the absence of disability and variability when speech, language or communicative disorders are present. Current conceptualizations of speech, language and communication disabilities take a person-centered approach and a bio-psycho-social framework of health and disease (WHO-ICF) that encompass three ontological domains: body functions and structures, activities, and participation. The framework crucially lists environmental factors that interact with each domain. I illustrate how UD can successfully be integrated with an ICF framework in the domain of speech, language and communication impairments; I then propose that the ICF model can be extended beyond disability to non-clinical populations and settings, to meet the communication rights for all.

Keywords. Human rights, ICF, speech, language, communication, individual differences, universal design.

1. Introduction

In this essay, I approach language and communication from a human rights' perspective, and sketch the positive ways in which Universal Design (UD) approaches, as they apply to the domains of language and communication, can contribute to the realization of language and communication rights as human rights, for all people.

By definition, Universal Design aims to meet human variability from the get-go [1, 2]. However, both at the level of individuals and of socio-cultural-linguistic communities, variability in core language functions – how people comprehend and produce language in spoken, signed and written forms, and variability in how people communicate with each other – exchange messages in spoken, signed or written form – pose greater challenges to UD than variability in other human functions, such as vision or mobility. Being able to plan for language and communicative variability, therefore, entails considering many different factors and sources of variability. Some of these factors are best characterized as *linguistic individual differences*. These include a person's language

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proficiency due to their age, linguistic exposure, literacy, and multilingualism and the presence of developmental or acquired language and communication impairments. Message level and additional contextual factors interact with individual differences and may facilitate or impair language functions and communication success. Known sources of variability are the quality and composition of messages themselves (register, message complexity, domain-specific discourse and terminology, real-world, cultural and extra-linguistic knowledge). Even greater variability comes from the interactive and dynamic nature of communication, so "interlocutor" properties are also at play (e.g., familiar vs. unfamiliar interlocutor), or whether communication occurs with one person or many. We will see in section 4 that there are explicit ways to code the importance of interlocutors as part of the "human environment" which is relevant for communication. In addition to the human environment, one must also consider acoustics, lighting, and digital media characteristics. These dynamic environmental characteristics interact: the experience of having a difficult time understanding a multi-way conversation in a language or dialect we are not proficient in, or the difficulty in following a conversation remotely with poor audio quality is probably one we can all relate to. Therefore, anyone who deals with language and communication, and works in a UD framework, should be aware of these dimensions and should intervene when they are in the position to do so, whether it be conversing face-to-face with an interlocutor, writing a document, planning a classroom in a school, or designing signage in a public building.

The rest of the essay is organized as follows. I start from a brief overview of how language and communication rights were initially addressed in international human rights treaties [3, 4, 5, 6], and how they were assimilated into the Convention on the Rights of People with disabilities (CRPD, UN 2006) [7]. The CRPD is the first international treaty to explicitly address different aspects of linguistic and communicative accessibility. I then review how speech, language and communication are conceptualized in the International Classification of Functioning, Disability and Health (ICF, WHO) [8]. I show how a UD approach to the environment (as defined in the ICF) can complement interventions addressed at an individual level so as to increase functioning, activities and social participation of all people, including people with language and communicative disabilities. I end with some environmental considerations that UD practitioners should keep in mind when planning for linguistic and communicative diversity.

2. Language and Communication rights as human rights

The ability to acquire and use a human language and the ability to communicate are essential to human functioning and well-being. Human languages allow people to represent, produce and understand an infinite range of expressions from the combination of a finite set of buildings blocks. Being able to send and receive messages and to participate in communicative exchanges in verbal, signed, written form is essential to freely express one's needs, wants and opinions, to form meaningful bonds with other human beings, to seek information and to understand others, to interact freely with familiar or unfamiliar interlocutors across all life domains, including health-care, education, culture, employment, mobility, and leisure.

Individual linguistic rights fall under individual fundamental freedoms in Universal Declaration of Human Rights (UDHR, UN, 1948, Article 19: "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without

interference and to seek, receive and impart information and ideas through any media and regardless of frontiers") and anti-discrimination provisions (discrimination on the basis of "language") [3]. Linguistic rights at the community level are affirmed as the right of linguistic minorities to use their own language, as stated, for example, in the Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities [4]. The declaration on the rights of linguistic minorities also carries with it implications for language policies as they relate to acquisition, education (e.g., access to education in one's native language), the connection between language and identity and language and culture, as expressed in Article 4 [4]. Language and communication rights are affirmed in additional international treaties (e.g., Articles 5 and 15 of the International Convention of the Elimination of all Forms of Racial Discrimination, UN, 1965; Articles 19, 21 of the International Covenant on Civil and Political Rights, UN, 1966) [5, 6].

Although fundamental human rights – by definition – apply to all people, explicit mention to the language and communication rights of people with disabilities appears for the first time in Article 21 (Freedom of expression and opinion, and access to information) of the Convention on the Rights of People with Disabilities (CRPD, UN, 2006) [7].

Two observations with respect to the definitions that the CRPD gives of "language" and "communication" are in order, the first one is very positive, the second one is very critical. I will start with the positive comment. "Language" in the CRPD is defined as to include "spoken and signed languages". This is an important milestone for human rights, as the CRPD is the first international human rights treaty to include sign languages as human languages. My critical comment comes from the observation that "languages" (spoken and signed) appear listed on par with communication systems. In the definitions section of the CRPD (Article 2), we read that "Communication" is: "languages, display of text, Braille, tactile communication, large print, accessible multimedia as well as written, audio, plain language, human-reader and augmentative and alternative modes, means and formats of communication, including accessible information and communication technology. Listing "language" in the definition sections along with and almost on par with communication systems, writing systems, or the media or formats through which language can be expressed, can lead to gross misunderstandings and perpetuate still too common harmful misconceptions, such that Braille is a "universal language", or that there is a universal sign language, or that sign languages are mutually intelligible (I have heard different versions of these statements more than once, among well-meaning and culturally aware individuals). The constitutive properties of human languages – spoken or signed – are distinct from those of communication systems. Although the intention is clear (describe the different ways in which communication may take place), it is inappropriate to confuse language – a generative combinatorial system pairing form and meaning – with the modalities through which communication via language may take place.

The CRPD does not specifically refer to people with language or communicative disabilities (or any specific disability at all). Article 21(b) lists "sign languages" (i.e., full-fledged human languages) on par with Braille (a writing system), again something that derives from a lack of precision in the definitions in Article 2. Nonetheless, the real force of the CRPD in asserting communication rights as human rights lies in the fact that it is the first international treaty to state that humans may communicate in a variety of ways and to make explicit reference to the importance of providing multiple ways of conveying information. In a disability perspective, this requirement may be framed as an

accessibility requirement or a reasonable accommodation requirement, depending on the context. A UD perspective, however, goes beyond accessibility. Meeting human diversity with respect to communication rights requires thinking about how environments be communicatively friendly for all people. The perspective of people with language and communication impairments must also be taken into account.

3. Language, speech, sign and communication in the International Classification of Functioning, Disability and Health (ICF)

Around the world millions of people live with a developmental or acquired speech, language or communication impairment. For example, one common – but not widely known [8] – acquired neurogenic language disorder is Aphasia, which affects a person's ability to understand and produce language, and has consequences on their ability to communicate. It is estimated that around the world five million people live with aphasia [8]. Current conceptualizations of speech, language and communication disorders encompass three ontological domains: body functions and structures, activities, and participation (ICF-WHO) [9]. Language functions in the ICF are part of the "body functions and structures" domain, whereas "communication" belongs to the activity domain. The ICF is theory neutral, it does not commit to one particular theory of language or another. The ICF does, however, make some fundamental distinctions, such as those between language as a special mental function (B167 Macro Chapter), voice functions (B310 Macro Chapter) and articulation functions (B320 Macro Chapter); as well as the ontological distinction between language as a mental function and communication as a separate category all together. In fact, in the ICF, communication is classified as an activity, and has its own Macro Chapter (D3) and a number of sub chapters, covering a range of communicative behaviors (e.g., non-speech vocal expressions) communicative genres (e.g., conversation, discussion), units (e.g., initiating, sustaining, ending a conversation), and settings (e.g., discussion with one individual or more).

The fine-grained ontology of the ICF and the distinctions provided in the are much more suitable for UD than the ones included in the CRPD. The definitions in the ICF are brief, comprehensible to a general audience via the use of plain language. As an example, take the definition of d3551: "discussion with many people". This is defined as "initiating, maintaining, shaping or terminating an argument or debate with more than one individual". The fact that the distinction between one or more interlocutors is made comes from the fact that the ICF is informed by clinical and rehabilitation sciences. The ICF model is increasingly used by speech-language pathologists (SLPs) worldwide as a more holistic approach to assessment and intervention for people with speech, language or communication impairments [10].

The ontology of the ICF has its scientific foundation in psycholinguistic models of language comprehension and production, as it contains separate chapters for each processing modality and broad linguistic units (words, sentences, discourse). The field of psycholinguistics as a basic science provides rich knowledge of individual variation in language functions, including age-related variation, task related variation, variation due to language proficiency and multilingualism and variation due to impairment. For this reason, the ICF can be used to capture the full range of human variability in language and communicative functions, irrespective of disability, and should be viewed as compatible with UD.

4. Linguistic and communicative environmental factors

As reviewed in previous sections, because of the dynamic nature of communication activities, we must consider a host of human and non-human environmental or contextual factors. In the ICF, these factors are classified into five domains: support and relationships; attitudes; products and technology; natural environment and human-made changes to the environment; services, systems and policies. Environmental factors in the ICF are always encoded in neutral terms. As an example of how to code a communicative environmental factor relevant to a person's communication right in a very frequent socio-communicative setting, consider a common barrier to communication success and participation – sustaining a conversation in the presence of background noise. To code an environmental factor as a barrier, a point (".") is placed after the factor, followed by a qualifier ranging from 0–4 (0 = no barrier; 4 = strong barrier). To qualify an Environmental factor as a facilitator, a plus sign ("+") is used followed by a qualifier ranging from 0–4 (0 = no facilitator; 4 = complete facilitator). If communication with background noise is a moderate barrier for a particular person (irrespective of the etiology – it could be aphasia, hearing loss or even low proficiency of the language being spoken) this corresponding environmental "e2501 sound quality" would be followed by a "." and coded as e2501.2.

The type of intervention or accommodation required in this case is clearly not clinical in nature, but it does require awareness and an ability to operate adjustments to the situation. The kind of adjustment will depend on what is possible and whether a UD approach has been pursued. To make this example even more concrete, if the organizers of an international meeting involving a linguistically and demographically diverse group of participants are aware of the negative impact on communication and participation of certain acoustic environments (e.g., reverberating rooms, poor lighting, noise), they may choose a venue with better sound and lighting characteristics than others.

There are additional system-wide environmental considerations that UD practitioners can adopt to address language and communication rights, and many of these are also listed in the CRPD. These include the provision of information presented in multiple formats, the use of information and communication technology as a means to allow for information to be digitized and transformed into an accessible modality (e.g., providing videos with subtitles or captions, or audio-descriptions). Advances in speech, language and communication technology, such as automatic speech recognition (ASR) are making this option increasingly wide-spread and available [11].

A different example of the application of the neutral coding of the ICF across disciplines with a special attention to language and communication in a complex ecosystem (a university) is described in [12]. We set out to define a set of multi-domain indicators for universally designed higher education environments. In addition to considering physical accessibility and navigation, we included indicators for communicative accessibility, including flexible signage, plain language, and the use of ICT to produce multi-modal texts such as audiovisual recordings with captioning in classrooms and lecture halls. The multi-domain instrument also addresses communication policies, websites, public engagement and indicators for linguistically and communicatively inclusive events. Awareness of the impact of the acoustic and lighting properties of the built environment on how people communicate is also of designers of the built environment. In designing a classroom where people speak multiple languages or where students may be non-native speakers, deaf, hard of hearing or blind, clearly the interaction of the multiple factors (individual, contextual) must be

taken into account from the beginning. The existence of a common, coding system like the ICF, greatly facilitates the enterprise and makes UD more likely to serve its function.

5. Conclusions

In this essay I have discussed some of the issues and challenges that UD practitioners need to be aware of with respect to language and communication. For UD to be more than a technical implementation, it must be grounded in values that are coherent with the spirit of UD, namely, to embrace human diversity and to value diversity [1, 2]. This also means approaching language and communication from a human right's perspective, which must also include speakers with language and communication impairments [3-8]. Language rights in a human right's perspective are founded on a number of core tenets, applicable to all speakers/signers and to all languages whether spoken or signed. We can summarize these tenets as follows: *Liberty*: human beings have the right to choose the language(s) they use to express themselves. *Dignity:* all languages have equal dignity, irrespective of language status and or social prestige; *Identity*: language is a form of identity, at the level of the individual, community and/or the state; *Non-discrimination*: individuals should not be unreasonably disadvantaged because of their language preferences; *Diversity*: linguistic diversity is an expression of human richness and creativity, minority and indigenous languages at risk of extinction deserve special attention and efforts.

Irrespective of their field of expertise, UD practitioners benefit from adopting the ICF and using the ICF to communicate with each other across disciplines. Everyone benefits from Universal Design. For UD to succeed in practice, multi-disciplinary design teams are necessary, whether this is in the material design and construction of university classrooms and lecture hall, or when planning an international event that wants to be accessible and inclusive for all. Deciding where to host the post-conference reception so that participants can engage in conversational exchanges with each other and network with equal dignity and opportunity so that nobody is left out, *is* a matter of universal design.

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