

A Capabilities View of Accessibility in Policy and Practice in Jordan and Peru

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Abstract: We explore the recent evolution of accessibility-related policy in Jordan and Peru, and specifically consider issues around assistive technology access for people with severe vision impairments. We find differences in capacity development and institutions in the two countries over time and how it impacts the ways in which recent policy consultations have taken place, and propose a capabilities framework as a means to examine and contextualize these differences. Narratives of assistive technology use by people in both countries emphasize ways in which the capabilities approach is also a valuable tool in understanding aspirations and how social interactions evolve with access to assistive technology. We argue that the findings from Peru and Jordan, given the diversity of policy environments, infrastructure, and socio-economic attitudes towards people with disabilities, give us an important lens towards understanding the evolution of disability rights and policies in various low and middle-income countries around the world.

Key Words: assistive technology, cultural studies, visual impairment

The capabilities approach emerged as a framework for reexamining the issues of global welfare in human values beyond a monochromatic income view of development (Sen, 1980; Sen 1993). The approach came about at a time when discussions of development were dominated by a small set of macroeconomic indicators which were measured to indicate the level of progress for nation-states. Capabilities thus shifted the attention away from, not just what the individual and collective in a society had functionally attained in monetary terms, but took a holistic view of the freedoms that were experienced in various societies, and how these in turn could be examined to create a broader measure of quality of life. While the central idea of understanding non-monetary measures of well-being has been a foundational principle of this lens, the approach has since undergone as many transformations and interpretations as the social conditions it examines (Nussbaum, 1995). The adaptability of the capabilities approach enables it to reflect the diversity of the human condition – to serve as a lens to examine a range of situations where existing inequities may result in some form of marginalization or capability deprivation. Applied to the experience of physical and sensory impairment, the capabilities approach provides a valuable framework for embracing the multiplicity of conditions that constitute the experience of individuals with disabilities. In representing a departure from utilitarianism, the capabilities approach encompasses both the immediately measurable achievements such as access to services, income, education among others, as well as the ability and freedom to conceive and achieve it (Sen, 1987). Cultural studies have adapted this in the form of a “capacity to aspire” (Appadurai, 2004) as a means of interrogating the ways in which culture impacts the ability and intent of a society to be more inclusive. Thus cultivating aspiration as “navigational capacity” is a means for empowering individuals to exercise agency over their own participation with society. We use this perspective to our study of Accessible or Assistive Technology (AT), since the

instrumental purpose of AT is to enable means of access to abilities and aspiration, and our own past work shows that AT impacts the sense of social and economic aspiration among people with vision impairments (Pal, 2010).

Several key ideas of the capabilities approach are relevant to contemporary discourses on disability and society, particularly with regard to social and economic barriers to opportunity. Ideas such as individual differences in the ability to transform and use resources, the importance of a range of material and non-material factors contributing to sense of well-being in society, control over our environment, the distribution of opportunities in society, and the functional ability to act on substantive economic, political and cultural freedoms are all ideas that have been used to operationalize the capabilities approach. These ideas are important in understanding the social inclusion of people with disabilities, particularly in societies where policy around disability is actively evolving.

Both disability and poverty, which has been a much more common area of research on capabilities work, are defined and exacerbated by the existent level of accessibility in the respective contexts of their operation. Over time a number of important works have confronted issues around disability and agency in a range of theoretical and disciplinary traditions including gender studies (Nussbaum, 2007), policy (Mitra, 2006), learning sciences (Terzi, 2005; Reindal, 2009) and social exclusion (Burchardt, 2003). Work using the capabilities approach has made a prominent theoretical impact on the mainstream disability studies community (Baylies, 2002; Burchardt, 2004), and the last decade has seen an important increase in work in this space, particularly looking at the developing world (Trani, Bakhshi et al., 2009; Groce, Kett et al., 2011; Graham, Moodley et al., 2013).

Fundamental principles of agency and opportunity have been elemental concepts in the building of disability studies from the early days of the formalization of the social models of disability (Finkelstein, 1980; Groce & Groce, 1985; Oliver, 1997), and in the negotiation of disability as identity (Linton, 1998) as well as its cultural representation by the mainstream (Shakespeare, 1994). Work on the social models of disability, which discuss the ways in which structural and cultural aspects – ranging from the lack of accessibility in public spaces to negative attitudes towards people with disabilities are what shape the experience of disablement rather than the physical condition, per se. This is an important shift away from the “medical model” of thinking about disability which defines disability in terms of an individual’s physical or sensory impairment, often as something to be cured, rather than as society’s inability to be accessible to all.

Our contribution here is to expand the capabilities approach into thinking about assistive technologies and aspiration. We do this starting at two points for examination of capabilities perspectives – the policy-making approaches on AT, and the experiences of AT access and use from individuals themselves.

First, we examine with a capabilities lens the planning process related to implementing disability policy. The discourse around progressive disability rights policies in Low- and Middle-income Countries (LMICs) is invariably tied in with broader questions of economic development. While these discourses can be observed at various points in the public sphere, there

can be few more important loci of examination than the experiences of people with disabilities themselves.

Second, we consider a capabilities approach to the use of assistive technologies for people with vision impairments, in this piece specifically with Jordan and Peru, but by extension in the context of the developing world more broadly. We examine assistive technology as an artifact of capability enablement, what one may call an element of freedom itself. We discuss results from interviews of assistive technology users with vision impairments in Jordan and Peru, examining the extent to which the technology has been a factor in increasing their access to economic and social opportunities in the public sphere.

A Capabilities Lens to Disability Policy and Accessibility Planning

The opening of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) brought to fore the first major international policy document urging nation states to create a greater culture of accessibility, and to consider inclusion from a rights-based view of disability. The UNCRPD created history by being the most signed convention on the day of its opening. Many signatory nations are among the poorest nation-states in the world. The early years of implementation of the UNCRPD has led to an increase in scholarly research relating to disability rights and accessibility in the developing world (Hernandez, 2008; Kett, Lang et al., 2009; Szymanski, 2009; Ahmad & Ahmad, 2010; Aldersey & Turnbull, 2011; Meekosha & Soldatic, 2011), and more specifically on the need and scope of assistive technology in these regions (Eide, Oderud et al. 2009; Pearlman, Cooper et al., 2009; Simpson, 2009; Kelly, Lewthwaite et al. 2010; Borg, Lindström et al., 2011).

A capabilities approach is salient in thinking about disability policy because of the centrality of agency and opportunity in the global history of disability rights activism. The phrase “Nothing about us without us” has been a fundamental principle of the disability rights movement in much of the western world, and has come to typify the representation and consultation of people with disabilities in decisions related to social and economic inclusion (Charlton, 1998). Though signing the UNCRPD represents an important first for many nation-states, enacting its principles meaningfully requires states to make sizable investments. For citizens with disabilities in LMICs, the CRPD represents a hope of greater inclusion, but also a risk that their governments’ priorities in areas like poverty reduction and nation-building will trump immediate attention to investment into accessibility.

The ability of nation-states to culturally interpret international law has typically meant that the implementation of several such conventions is varied and dependent on appropriation of the nation-state in question, as has been seen in the cases of human rights (Hathaway 2001), women’s rights (Cook 1989; Venkatraman, 1994), and torture (Miller, 2002). In the discussion of capabilities, such a cultural argument is one of the important warnings that Martha Nussbaum puts forth in her contemplation of global gender issues (Nussbaum, 1995). From an international law perspective, the granularity in outlining specific rights and responsibilities is very important. Greater specificity has the benefit of highlighting the importance of each set of rights, but also offers the risk of the blatant non-fulfillment of those mentioned provisions. The CRPD is fairly detailed in noting particular needs including workplace accommodation, low-cost AT, public

access, education, rather than a shorter document with a more general call to commitment. Yet, along this specificity is a language that allows nation states flexibility to move towards goals at their own pace.

There has been little work that brings together issues of policy alongside the voices of stakeholders with the primary experience of disability in the public sphere. The process of planning an “implementing” of the convention involves legislative work, as well as a significant process of setting up earmarks and priorities for spending. It requires a recalibration of existing disability-related laws in language and in spirit. In several countries, the CRPD has been the default framework for disability given the lack of any existing disability-related legislation.

Lastly, it is important in the capabilities discussion to note the role of Disabled Peoples’ Organizations (DPOs). Most countries around the world have at least some existing network of DPOs and many cases these have been the de-facto campaigners for rights, policy, and services. The role of DPOs is critical in understanding accessibility policy from a capabilities perspective since these are composed of people with disabilities and are often the channel for the voice and narratives of individuals and their experiences. As organized entities, DPOs have frequently been at the forefront of agitation around disability rights, and in many countries have been conduits if not the very providers themselves, of services for people with disabilities (Miles, 1996).

DPOs can also be instituted very differently based on what is the standard for the places where they exist – in Jordan, for instance, we found that DPOs, like NGOs in general, are highly beholden to the government, and are often overseen by representatives from the government. This paradigm is common for a number of countries with more centralized forms of governance. In contrast, Peru had a very independent DPO sector which had a history of openly voicing its dismay with policies and advocating for change.

Policymaking for implementation of the UNCRPD and its social model for disability therefore requires a basic accordance with the principles upon which the Convention is based. The Convention is unique in its explicit delineation of those principles, articulated in Article 3 and including provision (c) “Full and effective participation and inclusion in society.” The unequivocal nature of this guiding principle is further contextualized by the one that follows, (d) “respect for difference and acceptance of persons with disabilities as part of human diversity and humanity.” In order for a disabled citizen to have full and effective participation and inclusion in society, the unique capabilities and characteristics of that individual must be recognized. This individual must have a voice in the creation of his environment. Indeed, as Valerie Karr notes in studying UNCRPD implementation from a quality of life perspective, self-determination was a powerful indicator of quality of life. Clearly embracing the capabilities approach in its guiding principles, the UNCRPD identifies certain bases upon which effective policymaking rely (Karr 2011).

Assistive Technology Within the CRPD Environment

In this paper, we apply our theoretical framework to the experience of vision impairment and the workplace, specifically concerning Assistive Technologies (AT) and socio-economic

opportunities. We primarily focus on computing-based AT such as screen readers on PC or mobile platforms, accessibility and way-finding apps which are used for geographical navigation, magnification technologies as well as Braille displays, all of which allow a person access to computing and networking. For people with vision impairments, the importance of AT in economic and social participation has been fairly well documented in the last decade, especially as computing has become ubiquitous in the workplace (Mackelprang & Clute, 2009; Fok, Polgar et al., 2011).

The importance of AT and Accessibility in the CRPD is notable from its mention in instances -- Articles 4 (General Obligations), 9 (Accessibility), 20 (Personal Mobility), 21 (Access to Information), 26 (Rehabilitation) and 28 (Work and Employment) each cite the obligations of state parties to develop, provide, and sustain low-cost assistive technologies, workplace accommodation, and accessibility for their populations. Although there has been some work on the scope of the Convention (Kanter, 2006) and on the education of children with disabilities in relation to the convention (Hernandez, 2008), there has been little research on contextualizing AT to the ground realities of employability and social participation in LMICs. There are a number of technical concerns about access to AT, in large part because these technologies are often designed with a western audience in mind, optimized for the operating environment (bandwidth, language, processor capacity) of computing environments in industrialized nations. Likewise AT tends to be unaffordable in LMICs, and employers are rarely willing to invest in them. Our goal here is to examine the techno-deterministic idea of AT representing capability – that technology can level the playing field. To do this, we first examine the recent disability policy making process from a capabilities perspective, and then consider the narratives of individuals talking about their recent workplace experiences.

Empirical Research

Jordan and Peru are economically on the higher end of the LMICs, but the two offer interesting contrasts vis-à-vis accessibility and the implementation of disability rights. The selection of the two countries was done based on stratification of countries first based on their income, size, status as CRPD signatories, and regional diversity. We finalized on Peru, Jordan, India, and the Philippines to cover a broad regional diversity in size and income, and from that narrowed in on Peru and Jordan in part because of the receptiveness of local partners to work with us, as research of this nature is very difficult without significant access to policy professionals, and to non-governmental organizations active in this space. At the time of starting the research, Jordan was representative politically and in size to a number of the other countries in the region (though that has changed due to developments since), and Peru likewise was an important middle-income Latin American country comparable on demographics, urbanization, and economic diversification to several other countries in the region.

We conducted a textual analysis of the available CRPD reporting documents and associated materials from Jordan and Peru. We overlay our policy discussion with in-depth interviews with 75 individuals with vision impairments – 25 in Jordan, and 50 in Peru. In the interviews (30-90 min), respondents discussed issues related to their public sphere experiences, particularly in reference to their AT use. Interviews in Peru were conducted in Spanish, in Jordan, in Arabic,

and in person – by researchers from the respective countries who are part of the team of authors. The excerpts used here are verbatim translations.

Of the total 75 respondents, 65 were employed full or part-time. This is not representative of the general population of people with vision impairments, which tends to have a lower rate of employment, and higher incidence of poverty. As we find below in Table 1, our surveyed population has fairly high education, with the majority in both countries having some form of college education. Arguably, our sample being restricted to only those who use some form of AT reduces the number of poor individuals represented in the work. In a sense, this research represents the professional elite within the community of people with vision impairments.

Table 1: Sample description by highest degree of education

Country	Gender	Primary School	High School	Some College	Vocational Degree	Bachelors Degree	Masters Degree	Professional or Doctoral	Total
Jordan	Male	1	4	0	1	4	6	2	17
	Female	0	1	0	0	6	1	0	8
	Total	1	5	0	1	10	7	1	25
Peru	Male	0	0	5	7	5	0	9	26
	Female	0	0	2	11	0	2	9	24
	Total	0	0	7	18	5	2	18	50

All interviews were coded by team members, 121 codes were used in all, and the entire sample had a total of 1206 codes. All the interviews were read at least three times by various team members contributing to the coding process. The coding was done by the larger team of researchers, thus the data from each country was examined by other team members for triangulation. The themes we discuss in this paper are independence and capability deprivations – both social and structural.

Table 2: Principle themes used for analysis of interviews

1. Theme: Independence and Empowerment	
<u>Nested codes:</u>	
a. Independence increased by AT use	99 instances
b. AT increased socialization	81 instances
c. Privacy through AT use	23 instances
d. Aspirations raised through AT use	66 instances
2. Theme: Capability Deprivations (Structural):	
<u>Nested codes:</u>	
a. Infrastructure problems	18 instances
b. Public transportation problems	49 instances
c. Problems in educational accessibility	52 instances
d. Quota implementation & underemployment	36 instances

3. Theme: Capability Deprivations (Socio-economic)

Nested codes:

a. Lack of societal awareness	78 instances
b. Discrimination in society	66 instances
c. Low possibilities of growth at work	21 instances
d. Low physical accessibility at work	22 instances

Disability Policy, Post CRPD: Planning Analysis

In both Jordan and Peru, the recognition of a social- and rights-based model of disability begins with the involvement of DPOs and activists in the planning process related to the disability policy. Jordan signed the convention on the day of its opening on March 3, 2007 and ratified it exactly a year later on March 31, 2008. Till 2013, Jordan had not submitted an official progress report to the UNCRPD Committee. In the immediate aftermath of the CRPD, there was a national law (#31) on the Rights of Persons with Disabilities. In January 2012, a consortium of DPOs and activists put together an independent report discussing the progress around specific articles in the convention in Jordan, which levels a number of critiques of the state of affairs.

The national approach of Jordan towards disability issues is defined by a two-phase National Disability Action Strategy. A look at the bases for formulation of such strategy, however, raises concerns as to the potential efficacy of its content in producing outcomes reflecting the principles of the capabilities approach. First, the strategy adopts a “medical welfare” definition of disability (Al-Azzeh, 2012). The centralized nature of Jordanian policy-making purports a top-down strategy for disability policy which is guided by the available store of consolidated information, rather than a strategy based on public discourse. Consequent limitations in the breadth and depth of information on the lived experience of disability in Jordanian society become a significant gap in the resulting policy. One important manifestation of this distance was in the lack of disaggregated census data collection that represents the geographical and gender distribution of disability (Al-Azzeh, 2012), without which effective planning and earmarking of funds for citizens with disabilities is extremely difficult.

Participation of DPOs is a key issue in Jordan, which were excluded from formal representation at the preparation of official CRPD discussions. This problem is further exacerbated by the confluence of overlapping governmental organizations and jurisdictions dealing with persons with disabilities (Al-Azzeh, 2012). The state-controlled High Council for Disabilities was not only responsible for CRPD compliance, but had become the de facto assistive technology provider for many persons with disabilities, not the original mandate it was set up for. The lack of connectedness with ground realities was reflected in this fact when the High Council decided to distribute laptops and screen readers directly to individuals as part of its AT investments, which were immediately sold by the beneficiaries in the market. In the words of one respondent, “No one asked them what they wanted. They were not consulted on which Screen Readers and which laptops they wanted to use.” The intimate relationship of NGOs with the state in Jordan (Schlumberger & Bank, 2001) meant that there was no effective counterbalance role played by civil society or DPOs in the process, as these were all beholden to the Ministry of Social Development which licenses them. The Jordanian case also underlines one critical element with disability policy in similar LMICs which may not have existing systems

in place – the High Council’s work frequently overlapped with that of several other agencies and there were frequent issues with Ministries of Social Development and Education on jurisdiction.

Interestingly, there has been a collaborative planning process in place for the consultation of activists through an informal campaign referred to as ‘Takafu’ in which various stakeholders met with state officials practically on a weekly basis. The campaign engineered changes to the constitution on voting laws for persons with disabilities through consultations with ministries even though there is still a welfare-based approach to the wording. The Takafu campaign underlines an unusual irony – while on one hand the informal, stakeholder-led meetings were able to campaign for better rights, the very nature of centralized decision-making meant that the informal group had the kind of influence that a regular bureaucratic process may have undermined.

And yet, this very nature of informality meant that the Takafu’s role in changing laws was not furthered into a long-term collaboration between persons with disabilities and the civil society and the government. Thus we find in Jordan a division between intents and outcomes. This division, as we discuss in the narratives of AT users themselves, is the legacy of a medical model, cultural issues related to perceiving disability in welfare terms, and the resulting lukewarm integration of people with disabilities and DPOs. This, alongside the fact that Jordan has not ratified the Optional Protocol, this further diminishes individuals’ control over their own rights and continued self-determination.

Peru ratified the convention and protocol in January 30, 2008, and started applying both documents on May 3, 2008. Unlike in Jordan, there had been a history of aggressive activism by DPOs, and a general law for people with disabilities in 1999 followed by a 2003 “Plan for Equal Opportunities.” The plan linked disability to the relationship of people with their surroundings, as a move away from the medical approach traditionally applied in legislation, and was the first to specify the need for AT and for ICT training centers. In 2005, there was the promulgation of a law for the promotion of internet access and physical accessibility of public internet facilities for people with disabilities.

Thus in Peru we find important roots of a capabilities thinking towards disability well before the CRPD, and this is indeed reflected in recent reporting. Jordan’s basic rights on voting were still being sorted through at the time of publication. Peru on the other hand, had a Plan for Equal Opportunities (2009-2018) to follow through to the previous decade’s initiatives. Similarly, on the planning front, unlike the informal approach of the Takafu’s consultations, in Peru the Disability Commission (CONADIS) was explicitly codified into the process by inviting “associations of persons with disabilities and their relatives to take part in the election of the five representatives of persons with disabilities and their families who are to sit on the commission.”

CONADIS has held workshops in various cities throughout Peru starting in 2008, soliciting feedback from DPOs and individuals with disabilities for the elaboration of this plan. In its report to the CRPD, Peru noted progress on a number of subject areas, and made specific monetary earmarks such as towards Article 5 (nondiscrimination), Article 26 (Rehabilitation) and in particular Article 33 (Monitoring) which underlines a commitment to

scrutiny. However, a number of other key areas including gender and disability, independent living, and political participation are not mentioned (Peru, 2010). An important trend of democratizing the discourse on disability policy in both countries was the existence of parallel reports and publications commenting on progress. Peru's parallel reports submitted by civil society offer a definitive glimpse of the latent problems with disability policymaking, noting that "there is no seriously structured and coordinated policy inside and outside the government that systematically includes activities for the promotion of employment" (CONFENADIP, 2010). Unlike Jordan, Peru has ratified the Optional Protocol so its civil society may file complaints directly with the UNCRPD Committee.

As we see in the two cases, there are important similarities and distinctions in the articulation of human capabilities and participative planning in addressing disability rights in the two countries. An important shortcoming referred to by respondents in both countries was the lack of effective information gathering on disability issues. Both countries had no disaggregated ability-based census; neither country had any formal examination of citizens' experiences with disability. Our following discussion of individual narratives helps understand the policy mechanisms alongside the realities of how people with disabilities participate in the public sphere, and the extent to which this has changed in recent years. While our policy discussion includes issues widely applicable to disability, our interviews were only with people with vision impairments. Nonetheless, the narratives of individuals offer critical insight to contextualize the policy developments from a capabilities view.

Narratives: Independence

Our user narratives represent over 400 pages of transcripts. We summarize only two themes here that are specifically related to capabilities. A striking theme was the extent to which people discussed AT as being important to social and economic independence. The distinction between potential and actual disability can be operationalized through the restrictions an impairment places on the individual's functioning (Mitra, 2006). This emerges strongly in the way that AT represented a reversal of various structural barriers. For our respondents, this extended from being able to use screen readers to participate in policy consultations to basic day-to-day economic and social functioning. For respondents in both countries, the idea of long-term care or economic dependence was frequently a fundamental part of the growing up experience, largely due to structural restrictions and a widespread negative visibility of disability, which depicts disability in terms of charity (Frix, Pal et al., 2010).

A starting point in the respondents' note of participation in public policy specifically or the social sphere generally was their expansion of social networks once they had access to AT. The work on vision impairment and social networks has shown that individuals' networks can be fairly reduced to a limited inner circle of connections (Lind, Hickson et al., 2003) which exacerbates the problem of lacking social networks and support needed for employability (Cimarolli & Wang, 2006). Recent work has started looking at the role of the internet in social support and expansion of networks for people with vision impairments (Gilson & Xia, 2007; Smedema & McKenzie, 2010). From our discussions here, we find that in both Jordan and Peru access to AT expanded networks and social support, and in turn provided sounding boards for policy participation.

“Before we felt somehow excluded from this virtual world because we didn’t have the accessibility we have now. Now we participate much more. I am even in contact with my friends from high school and university on Facebook, before I wouldn’t have imagined how Facebook or Twitter works. Now I can even interact with people outside this country, in other countries, in the other side of the world, thanks to social networks” (P.22).

Mirely, Female, 37 yrs, Lima

For people with vision impairments, the loss of privacy is often cited as an important barrier to independent living (Keeffe, Lam et al., 1998). We found in discussions that the problems with privacy in communication extended through a range of participative functions – from unfettered political discussion on forums related to policy to even the most basic forms of social participation in both countries.

“I don’t need my mom to read my private stuff. I can chat with other friends, to read my Facebook or download music from YouTube, anything. (...) The difference now is that I can listen by myself, I can listen to a book by myself, I can listen to anything I like by myself, I can look for information by myself. Before I had to ask my mom or a friend, sometimes I asked them to chat for me, they even knew my password” (P.6).

Silvia, Female, 35 yrs, Lima

The ability to build and sustain economic activity on individual terms was a really important part of access to AT. Peru has had a comparatively more strident disability rights movement in recent years. This has resulted in slightly better access to AT. Schools and institutions have for instance been providing access to various kinds of AT for relatively longer, even though there is a significant population that slips through the cracks on AT access. In Jordan on the other hand, systematic access to AT through institutions is relatively new. In our sample we find that Peruvians at an average had been using AT longer than Jordanians, for instance, even for an individual who had an electronics business in Amman had never come across AT until recently. In this respect, Jordan presented a problem that may occur across other LMICs as well – of individuals never having used computing-based AT before adulthood.

“So for example, I have a private business buying and selling computers. I would get some adverts and deals over the e-mail. If I need to read an e-mail concerning the prices of computers as I am buying them, I would not want a potential customer to see that e-mail.”

Fayaz, Male 37 yrs, Zarqa

In both countries, the negative public visibility of people with disabilities was driven by a combination of traditional beliefs related to the role of disability in society, and generations of excluding people with disabilities from the workplace. The relationship of disability with dependence in Christianity and Islam meant that the individual job-seeker could either be viewed

as mystical, as the object of virtuous suffering, or as a beneficiary of “Zakat” or charity (Miles, 1995; Hull, 2003).

“There are the people who think that, being a VI, you should stay at home and read Quran and blessings for others, because being blind, your prayers will be answered [sarcasm]. Because, you know blind people are blessed.”

Heba, Female, 29 yrs, Amman

“Maybe it’s (disability) assumed as a proof from God, like something to test your faith and nothing else (...) there are many people in the streets who talk to you about God and that you could be cured by praying and there is a big need from others to make you part of a religion.”

Armando, Male, 30 yrs, Lima

These beliefs are often extremely important in the ways they translate to the objectification of disability in policy. One of the biggest challenges in policy therefore has been laws around workplace accommodation and diversity. For AT users seeking to enter the workforce, the consequences of this went from a general unawareness of employers in the workplace abilities of people with disabilities to a flat out rejection of the possibility of hiring someone with a vision impairment.

“(The job search) was the worst time of my life. I would prepare a short CV after I graduated from High School. I would be thrown out of some places by the security. There are others who would give me money as though I am a beggar. He only looks at me as though I am someone in need and a conduit to get to heaven.”

Hassan, Male, 31 yrs, Jerash

The problem of late access to technology due to a lack of institutional investment such as AT through schools or community services is perhaps one of the major elements of policy not adequately addressed in either Jordan or Peru. Respondents noted a significant expansion of aspiration after they started accessing AT, in some sense because it made them more aware of their own capabilities. The lack of AT therefore represents a fundamental capability deprivation, because embedded in this is the structural problem of little or no awareness of AT among the general population, and among employers specifically.

Narratives: Capability Deprivations

One of the most persistent forms of capability deprivations has been the channeling of people with disabilities broadly and vision impairments specifically into certain vocations. In diversified economies, this has often been towards jobs such as lottery sales (Garvia, 1996), physical therapy (de Jong, 2005) or telephone operation (Jose & Sachdeva, 2010). The idea of “channeling” people with disabilities towards certain professions was found to be pushed in both countries as culturally relevant. As studies have indeed found, a range of barriers starting at or

exacerbated by the formal education system, contribute to the limitation of opportunities for people with vision impairments, especially when these interact with other institutional barriers around the way social services have traditionally been structured in the specific cultural contexts (Gilson & Dymond 2012).

The ability to universalize disability rights, particularly in choice of vocation, is relevant here for Jordan and Peru, and potentially for LMICs generally. The discourse of universalism, particularly where a certain set of rights is seen as originating in the West has been problematic in proposing capabilities approaches for various population (Nussbaum, 2001). A range of movements from human rights to women’s rights have faced challenges in international forums as being driven by one or another cultural agenda. These sets of concerns are particularly valid given the infantilizing view of disability as representing a motivation for charity and piety among the mainstream population.

“You cannot, as a VI in Jordan, go for a scientific stream; we usually have to go for the literary stream. Even in the universities they do not allow us; the system does not permit us to study anything we want, such as Engineering or IT.”

Asef, Male, 27 yrs, Jordan

“Since I am conscious and adult, since 1998 let’s say, since that year they keep training blind people for telephone operators, oh and masseurs; those two things, nothing else. So they are working on this for how many years and they can’t imagine that blind people or with low vision can do anything else as professionals other than masseurs and telephone operators.”

Carlos, Male, 42 yrs, Lima

Such channeling extended past the education system into the employment gateway and even the specific functions in a job. This eventually contributed to a greater sense of underemployment among the respondents, as they felt guided to jobs by exigencies more than by abilities or interest. The engineering of individuals towards certain vocations is clear in our research, even among highly skilled AT users. 36 of the 65 employed respondents remarkably held one of three jobs – massage therapy, telephone operation, or school teaching.

Table 3: Job Distribution – Professions

Country	Gender	Telephone/ Receptionist	Massage therapist	AT-related	Non-profit sector	Professional	Clerical	Teaching	other
Jordan	Male	3	0	2	1	0	0	7	3
	Female	0	0	1	0	1	0	4	0
	Total	3	0	3	1	1	0	11	3
Peru	Male	5	8	1	3	3	0	1	4
	Female	5	2	1	1	3	3	1	2
	Total	10	10	2	4	6	3	2	6

However, the spread of jobs also shows a remarkable difference between Peru and Jordan. In Jordan, especially because of the government's role in employing people with disabilities, teaching in the state-run schooling system was an important avenue of jobs, despite the risks of underemployment and workplace stagnation. In Peru, in contrast, telephone operation and massage therapy are the two most common professions. Massage therapy as a category does not exist at all in Jordan. Their employment in a "physical" work reinforced the idea of intellectual work as being outside of the realm of possibilities for people with vision impairments.

"...People think that people with disabilities are better for mechanical jobs. People relate blindness with masseurs, telephone operation, and telemarketing."

Rita, Female, 41 yrs, Lima

Underemployment had important consequences for the respondents' professional self-fulfillment in the work environment. Learning to use AT led to a greater realization of how separated jobs were from what one is able to do.

"The idea is that instead of getting welfare, you are only getting some money for sitting in the office. I do not need to use it [AT] when I am teaching. You know, you get employed by the Civil Services Bureau on 'humanitarian' basis as it is referred to. Once you are at the job, they do not actually want you to do anything; you do not have real duties at the job."

Ismail, Male, 33 yrs, Amman

We found that 29 of the 50 Peruvian respondents relied on themselves for their job search strategies, whereas only 6 of the 25 Jordanian respondents primarily searched for jobs themselves. In Jordan, there were fairly established routes of job searching, through quotas or institutional connections, and usually to the same few employment options that had grown to have small, long-term populations of employees with vision impairments. The existence of these arguably led to the lack of attention to the challenges that would exist were people with disabilities more evenly distributed throughout the workplace – such as spatial issues like poor access to sidewalks, overcrowded public transit and poor attitudes towards inclusion in transit. None of the reports from the two countries adequately addressed questions around public space inaccessibility, and how that adds to existing social attitudes towards disability, and the channeling away from full economic participation. For instance, respondents reported being disallowed from getting onto public transit since they were assumed to be beggars.

"I live in the camp in Jerash; therefore, there are a lot of transportation mediums I have to take before I get to Amman. Neither the people nor the infrastructure are ready to handle VIs. I leave my house at 7 am and get to my job at 8:30 am. Throughout these 90 minutes, I am in hell. There are a lot of stations, someone starts to admonish: 'why you left the house in the first place as a VI?' Someone else will try to cut the queue before you. Sometimes, taxis will not allow you on."

Khaled, Male, 31 yrs, Jerash

“For example, a policeman told me ‘why do you come alone?’, ‘because I come from work’, ‘but you should come with someone’. A policeman is supposed to help you and tell you ‘we’re going to help you to take the buses and that’s it, but no ‘why are you out alone? Why do you work? Your parents should help you.’”

Grecia, Female 35 yrs, San Borja

An important area of the discussion on inaccessibility was that of actual workplace access, for blind people. A huge concern was access to licensed AT. Due to the high cost of AT software on desktop machines, piracy was fairly widespread for home use. However, employers were neither comfortable with pirated copies, nor willing to invest in license AT.

“The systems administrator came here and deleted all my screen readers because they said that as we don’t have licenses, they didn’t want me to have it, so they deleted it. So I said ‘how am I going to work,’ ‘that’s not my problem’ he said, ‘I can install NVDA,’ but the NVDA is terrible because it’s free it’s a terrible version.”

Armando, Male, 51 yrs, Lima

Legal requirements for companies to provide an accessible workplace were unclear in both countries and will be an evolving challenge for CRPD implementation. Both Peru and Jordan had quotas for people with vision impairments, but in neither case were quotas entirely filled, nor understood in the spirit of a rights-based option for a population that has been systematically excluded from the workplace. While in Jordan the NGOs and DPOs were effective in connecting people with opportunities, their actual use in training was very limited. The comparison between the two countries on respondents’ place of access to technology is stunning – while only 1 of 25 respondents in Jordan used the NGOs for access to AT, the figure was roughly one-third in Peru where 14 of 50 respondents used NGOs for access, a majority of these being females. The gender aspects of AT and workplace is an important area that needs much further work.

Conclusion

A comprehensive national action plan, incorporating disaggregated statistics as on disability and involving disabled persons and DPOs in its formulation are key elements of a mechanism for implementing the Convention. We have argued here that the narratives of people with disabilities are an important additional aspect of information on disability that is rarely considered in national level data collection. The capabilities approach prioritizes the individual’s ability to actualize skills and potential. Prioritizing involvement and the voice of stakeholders is a critical part of this.

Our main proposition in this paper has been to emphasize the importance of a capabilities approach to scholarship on accessibility and access to assistive technology in LMICs by juxtaposing policy developments against the experiences of individuals whose immediate ability to participate in society is impacted by these policies. The CRPD has set the wheels in motion

on moving several nation states towards greater social and economic inclusion, but as we see in the cases of Jordan and Peru, there remain weighty challenges in closing the gap between policies on paper and attitudes in the public sphere. While the CRPD pushes for AT for better inclusion in the economy, the realities on the ground need to be understood through the narratives of individuals. Understanding the gap between the potential of independence and aspiration that AT gives, and the reality of structural disadvantages and employment-related “channelling” that we find in Jordan and Peru can be useful additions to examine multiple layers of capability deprivation in practice. We argue that the same is likely true in varying degrees for many other LMICs starting the process of re-evaluating their disability policy.

The rapidly evolving state of disability and the workplace, particularly with relation to AT development, makes it necessary for policy to constantly adjust itself. The cases of the Takafu and CONADIS represent two very different ways of integrating citizens’ voices into existing policy-making structures, but with both countries, no institutional mechanisms existed to create an ongoing public debate that highlights individual voices on issues of accessibility and does so more than just at the points of policy reports.

And though a lot of the narratives we articulate here suggest persistent deprivation of opportunity and accessibility, it is important to note that we were conducting research among people who are assistive technology users – themselves arguably an upper economic layer among people with disabilities who in LMICs may be among the poorest and most deprived within these growing societies. Broad-based incorporation of the range of voices in this space is likely to be one of the biggest challenges to an effective capabilities-based approach to disability policy.

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