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Sørensen, Rene; Ryhl, Camilla

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Responding to Diversity Including Disability

SØRENSEN OVERBY René* and RYHL Camilla

Aalborg University
e-mail: rso@sbi.aau.dk
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This paper constructs a framework for understanding how notions of disability influence the discourse on accessibility and Universal Design as well as the present understanding of the user role in Denmark. Implications are that the understanding of disability and design of architecture are not mutually opposed to one another. Instead they are closely interwoven in the fabric of designing for diversity. Through the perspectives of the UN Convention on the Rights of Persons with Disabilities, Disabled People's Organisations Denmark and the practicing Architects, the paper discusses three notions of disability. Initial findings of the PhD research project "Generating Inclusive Built Environments through User Driven Dialogue in the Architectural Design Process" along with qualitative research conducted at the Danish Building Research Institute frame former and current thinking, and discusses the scope of reviewing impairment as a condition of human variety in the architectural design process.

universal design, architecture, values, design process

1 Introduction

As modern Design Thinking welcomes design strategies that actively involve and cooperate with the user, attention to diversity of the users is growing. To some extent Design Thinking has developed into creating for people, with people. Hence a nuanced understanding of human diversity is desirable. In the Nordic Region, Co-design and User-Centered Design has become well known frames of processes to generate a wider understanding of user groups and bridge the gap between the designer and the individual user. User involvement is also used as a socio-political means to support inclusive strategies in Society, in order to embrace a broad-based community [Bayazit, 2004, Cross, 1972].

In a Danish context, the development of strategies involving users and growth of attention to diversity, also relates somewhat to processes of Inclusive Built Environment and accessible design solutions. In design practice, this has articulated new roles for Designers and Architects, in order to reconsider and transform design processes and create new platforms for social inclusion.

The Disabled People's Organisations Denmark (DPOD) has become one of the core actors in participatory processes of accessible design solutions and Inclusive Built Environments. DPOD defines their commitment to engage in efforts that serve to encourage and protect the rights of persons with disabilities.

The reason for these organisations' active participation in design processes partly grows from an absence of interest or engagement in the professional practicing Architects. Moreover, DPOD see accessibility as a means to realise a higher level of equality for their diverse group of members; people with impairments [http://www.handicap.dk/politik/].

As design and the role of creating in the Architectural process have been taking on new forms to meet participatory design strategies and involving new participants, this particular collaborative relationship also has addressed a need for a clarification of diversity and a possible mutual understanding of Disability, as a condition of human variety [Lid, 2012].

Drawing upon studies from the PhD research project "Generating Inclusive Built Environments through User Driven Dialogue in the Architectural Design Process" and research conducted at the Danish Building Research Institute, implications are that notions of Disability, understanding of people with impairments and design of architecture are closely interwoven in the process of designing for diversity and especially for the degree of accessibility in the completed building projects.

In this paper we will construct a framework for understanding how dissimilar notions of Disability not only influence the discourse on accessibility and Universal Design (UD) we will also hypothesise how it can interrupt dialogue and hinder collaborative relationships between the user group and the Architect. The paper presents three models of disability, the Medical Model, the Social Model and Bio-Psycho-Social Model and discusses their implications in the field of architecture in Denmark from three perspectives: the UN Convention on the Rights of Persons with Disabilities, Disabled People's Organisations Denmark (DPOD) and the practicing Architects. These three actors cover the Danish discourse on accessibility and Universal Design in three levels as macro, meso and micro levels.

In the paper we present initial findings of the PhD research covering results of participating observations in DPOD and qualitative interviews with DPOD representatives and professionals from the architectural field, compare their understandings of Disability and assess the influence of their dissimilarities when collaborating in the context of Universal Design.

When we use the term Universal Design (UD), it refers to a broad spectrum of methods meant to produce buildings, products and environments that are inherently accessible to all users regardless abilities, hence also children, older people, people without impairments, and people with impairments [Imrie, 2012].

Furthermore we regard UD as a value based design approach, which is not only represented in the final design, but just as much in the design process and the elements of which the process consists [Ryhl, 2009, Ryhl & Frandsen, 2016].

Through three Models of Disability, this paper frames former and current thinking of Disability and discusses the scope of ways of reviewing impairment and its implications to how the user is perceived in the Architectural Design Process. It is debated a wider understanding of human diversity, as a strategy, can lessen architectural barriers and body-based discrimination besides enhance Inclusive Built Environments and support the self-empowerment of people with impairments [Iwarsson & Stahl 2003].

2 Perspectives and interpretations of Disability

Models of Disability can be seen as means for understanding and defining impairment and, eventually, for providing a foundation upon which Society can formulate strategies for meeting the requirements of people with impairments. These models are often met with doubts and scepticism

as it is suggested they encourage narrow perspectives, are often incomplete and rarely offer detailed directions for action [Bickenbach, et al, 1999].

Nevertheless, they can be seen as useful frames in which to advance an understanding of disability issues as well as of social perspectives and attitudes to Disability. From this, Models of Disability describe the ways in which our Society provides or limits access to social life, work, political or economic influence for people with impairments. From an architectural view, Models of Disability also reveal the ways in which our Society engages to provide or limit access to and participation in the planned and built environment.

Models of Disability offer a comprehension of the notions and predispositions of understandings of Disability and may be used to frame current understandings of Disability. Furthermore the different Models of Disability give us an insight into the movement of changing social approaches to Disability.

We should not see the Models of Disability as sequences of options in opposite positions to one another, or replacing previous understanding. The Models are used in different contexts, sometimes overlapping to gain a broader perspective.

The three different understandings of Disability can be described as:

- Disability is an attribute of the individual
- Disability is related to the environment
- Disability is linked to the individual-environment relationship.

In an overall perspective, Models of Disability are influenced by two significant philosophies. The first view understands people with impairments as dependent upon Society. This view holds potential to lead to discrimination, overprotectiveness and social segregation. The second view understands people with impairments as a part of Society, as users of what Society has to offer. This view holds potential to initiate choice, equal opportunity, empowerment and social integration [Bickenbach, et al, 1999].

As we study three different models in this paper, we will deliberate the degree to which each philosophy has been applied. The three models, the Medical Model of Disability, the Social Model of Disability and the Bio-Psycho-Social Model are noteworthy components as we touch on the different interpretations of Disability together with the understanding of accessibility and Universal Design.

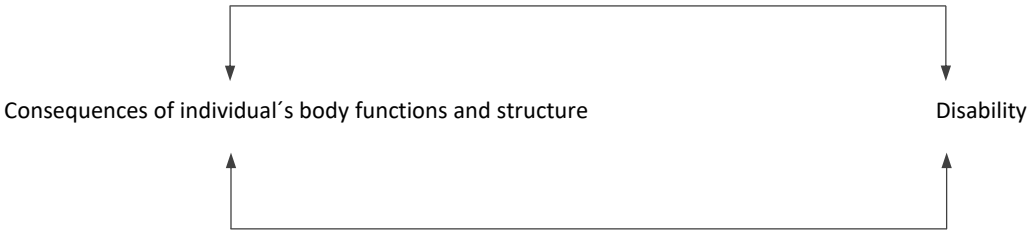
2.1 The Medical Model – a medical understanding of Disability

The Medical Model describes Disability as the result from an individual's physical or mental limitations. This view limits Disability to a condition arising from disease, disorder or injury. A person is considered disabled due to individual and health -related causes. From this view, Disability is not interrelated to social constructions or physical environments. The model is at times referred to as the Functional-Limitation Model which defines the focal point of this understanding [Bickenbach, et al, 1999].

Hence the Medical Model places the source of challenges within the impaired person, and concludes that possible solutions originate from medical attention to cure the individual. This understanding of Disability has been present in health care systems as well as in general public opinion. The Model has been strongly criticised because people with impairments are not necessarily sick and cannot become able-bodied through medical treatment.

Although we should not reject the medical and therapeutic aspects, which may cure or relieve the physical or mental condition of people with impairment, The Medical Model does not offer an accurate understanding from the viewpoint of people with impairments, themselves, or from others in general. Most would reject the thought of being "abnormal" or sick. Likewise, the model applies an approach to problem solving which, although well intentioned, focuses on care, wrongness of body or being-in-the-world and eventually can provide reasoning for institutionalisation, segregation or special solutions. This model is of the dependent-upon-society philosophy.

The Medical Model - a medical understanding of Disability



The Medical Model describes disability as the result from an individual's physical or mental limitations.

Figure 1. The Medical Model

2.1.1 The expert understanding of Disability

The Expert or Professional Model of Disability can be understood as a side-shoot of the Medical Model and is a traditional reaction to Disability issues. Within its frame, professionals and experts follow a process of identifying the impairment and its limitations and taking the necessary action to improve the position of the individual, based on their professional expertise.

Critical voices argue that this understanding of Disability has tended to produce a system in which contains an inequality that limits collaboration, an authoritarian prescribes and acts for a passive client, and while doing so increases the passive perception of the client. This restricts people's opportunities to make choices, control their own lives and develop their potential.

In its extreme, this thinking is argued to undermine dignity of the individual and hinder the ability to participate in everyday decisions, the basic human right of freedom over his or her own life.

2.2 The Social Model – a socio political understanding of Disability

The Social Model arose as a critical reaction to the earlier dominant medical models of Disability which in itself is a functional analysis of the body to be enhanced in order to conform to normative values [Lid I.M. 2010].

Instead, The Social Model holds Disability as consequences of social, attitudinal and environmental barriers which prevent people with impairments from full participation in Society. The model identifies barriers, negative attitudes and exclusion by environments and Society. From this perspective, the physical environment and Society are the primary contributory factors in disabling people with impairments.

Although physical, intellectual, sensory or psychological variety may cause individual functional limitations or impairment; these do not have to initiate Disability, unless societies fail to include people regardless of their individual differences.

The philosophy of The Social Model of Disability can be traced to the Independent Living movement (Ed Roberts) and the broader US civil rights movement in the 1960s, and the specific term emerged in the United Kingdom in the 1980s [Charlton, 2000].

The Social Model is also referred to as the Minority-Group Model of Disability based on a socio political definition of Disability, which has challenged studies and research based on the functional limitations paradigm. From a socio-political viewpoint, this argues that Disability stems from failure of Society to adjust and meet the needs and aspirations of the minority group, people with impairments. Mirroring the Medical Model this viewpoint introduces a radically different

understanding of Disability: If the challenges and solutions lie within Society and the environment, Society and the environment must change. If the built environment cannot be used by persons with impairments it must be redesigned.

The implication of this understanding is that the elimination of attitudinal, social and physical barriers will enhance the lives of people with impairments, offering the same opportunities and choices as others, respected and included as equals. Taken to a simplified conclusion, there would be no Disability within a fully advanced and accessible Society.

The strength of this Model lies in its placing the responsibility and action upon Society and not the individual with impairment. And it recognises impairment as a human condition. It emphasises the requirements of Society by the group of individuals whereas the Medical Model uses diagnoses to categorise Disability, and assumes that individuals with identical impairment have identical abilities and needs.

The Social Model - a socio political understanding of Disability

The social model arose as a critical reaction to the earlier dominant medical models of disability which in itself is a functional analysis of the body to be enhanced in order to conform to normative values.

Figure 2. The Social Model.

Identifying the necessity of a different understanding of Disability, the World Health Organization formulated the following definitions in their International Classification of Impairment, Disability, and Handicap (ICIDH-1), in 1980:

> ***Impairment*** – any loss or abnormality of psychological, physiological or anatomical structure or function.
>
> ***Disability*** –any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.
>
> ***Handicap*** – a disadvantage for a given individual that limits or prevents the fulfilment of a role that is normal.

Impairments, concerned with abnormalities of body structure and appearance resulting from any cause; Impairment thus represents change of the psychological systems or anatomical structures.

Disabilities, reflecting the consequences of impairment in terms of functional performance and activity by the individual; Disability thus represents challenges of the person.

Handicaps, concerned with disadvantages experienced by the individual as a result of impairment and disabilities; Handicap thus reflects interaction with and adaptation to the individual's surroundings [World Health Organization].

A challenge with implementation of this terminology has been the expressions “abnormality” and “normal life role” and a critique of this understanding as simplified and narrow. The thinking has by now been confronted for years, and increasingly so. Critical voices argues that what is called physical or mental “Disability” is not purely a characteristic of an individual but a complex cluster of conditions, relations and activities, many of which are created by our social environment.

Critique of the Social Model, point to its failure to emphasise and meet all aspects of Disability. To embrace and meet all individual abilities and aspirations in Society is a still an unmanageable challenge. Though well intended, accessibility and Universal Design anchored in a social understanding of Disability can create the potential of overlooking bodily experiences of accessibility and barriers. Critical voices argues that the focus on Disability as entirely social constructed and environmental substance has a tendency to “forget the human body” in it´s one sided view [Hughes & Paterson 2010].

2.3 The Bio-Psycho-Social Model – a relational understanding of Disability

Today, a more multifaceted International Classification of Functioning, Disability and Health (ICF 2001) have been formulated by the World Health Organization, in attempt to meet a more relational and complex understanding of Disability.

ICF organises knowledge in two parts:

1. Components of the Functioning and Disability
2. Components of Contextual Factors

In ICF, components of Functioning and Disability include two classifications, one for functions of body systems, and one for body structures. Environmental Factors are the first components of Contextual Factors and are organised in sequence from the individual´s most immediate environment to general Environmental Factors. Personal Factors is also a component in ICF but they are not classified on account of the large social and cultural variance associated with them.

From this classification, a person´s Functioning and Disability is perceived as a relational phenomenon, a dynamic interaction between Health Conditions and Contextual Factors.

Both the Medical Model and the Social Model of Disability provide valuable insight from two very different perceptions, but none of them are offering knowledge on how Disability grows in interaction between individuals with impairments and surroundings.

Hence specific theories that guide research and understanding can shift as a result of new knowledge and theoretical development. The Bio-Psycho-Social Model built upon both the Social Model and elements of the Medical Model and describes the interplay between reduced function and Disability, a social relational understanding.

Unlike the Social Model, the Bio-Psycho-Social Model acknowledges that inability of some impairment, to adapt to Society and the physical environment, may be an influential element of their condition. Nevertheless, the Bio-Psycho-Social Model maintains that Disability grows primarily from a social and environmental failure to account for requirements of citizens with impairment. Even though a person's impairment will include some limitations in an able-bodied Society, every so often the Surrounding Society and Environment are more limiting than the impairment itself.

The advantage of this model is that it does not focus on individuals’ limitations, but takes account of abilities and potential in interaction with Society.

The development of the Bio-Psycho-Social Model is often referred to as a social relational understanding of Disability. This terminology includes even stronger, the relation between the individual and the social-environmental conditions. A social relational understanding of Disability built on participation and equal opportunity and lay emphasis on interaction between the individual and the environment.

Furthermore this social relational understanding of Disability is placing enhancement and motivations as interplay between Society and the individual and can be seen as a dynamic model of improvement and innovation. It is today a well implemented understanding of Disability in The UN-Convention, The International Classification of Functioning Disability and Health: ICF. Geneva: World Health Organization, 2001.Hence this thinking is today widely acknowledged among researchers, activists and authorities together.

The Bio-Psycho-Social Model - a relational understanding of Disability

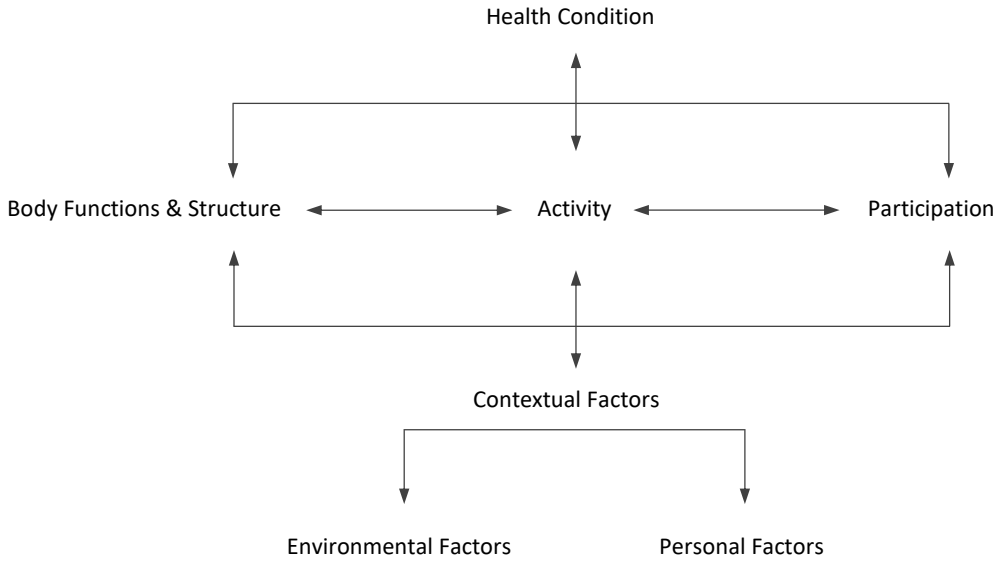


Figure 3. The Bio-Psycho-Social Model

3 Three present understandings of Disability

In order to be brought closer to existing understanding of Disability related to Universal Design (UD) in Denmark, we bring into play, three perspectives; the UN Convention on the Rights of Persons with Disabilities, Disabled People's Organisations Denmark and the practicing Architect.

The motivation for bringing in these perspectives is that these are three influential actors in the Danish discourse and it allows us to discuss the subject through a matrix of three levels. The three actors cover the Danish discourse on accessibility and Universal Design in three levels as macro, meso and micro levels.

Matrix of three levels

Macro level	Knowledge of ethics, humanity and views on human rights. The UN Convention, mission statements of legislation and community planning.
Meso level	Technical knowledge, design of services and assistance. Implementation of plans and regulations. Knowledge of collaboration in processes.
Micro level	Knowledge of individual´s perspective, where and how barriers occur and who experiences barriers.

Figure 4. matrix of three levels [Lid, I.M. 2013] .

The three levels of the matrix hold different approaches, different agendas and different objectives and they will support our effort to create a three dimensional framework for understanding how notions of Disability influence the discourse on accessibility and Universal Design.

Macro level, embrace ethics, thinking, understandings of Disability and views on Human Rights. Macro level handles Universal Design through policy and regulations.

Meso level is an intermediate level covering planning, regulations, implementation, technical knowledge and collaborative processes. Meso level requires technical and practical knowledge to develop and implement Universal Design.

Micro level holds knowledge of individual´s perspective, knowledge of where and how barriers occur and experiences of barriers by individuals with impairments. Micro level requires knowledge of the complex interplay between individuals and surroundings [Lid, 2013].

The PhD "Generating Inclusive Built Environments through User Driven Dialogue in the Architectural Design Process" studies themes of the three levels in the matrix. The PhD framework holds objectives to identify and reflect on the role of DPOD user group and discusses their experience and competency to be dialogue partners in design processes [Micro level].

It is the project's ambition to provide a critical reflection on the current situation and possibly suggest opportunities of development and potential for strengthening the user representatives as dialogue partners in collaborative relationships with the Architect [Meso level].

In the ambition of change and enhancement of user representation in the Disabled People's Organisations Denmark, the study draws on references from action research methodologies and involves the organisation, whilst simultaneously conducting research. The research is in some measure based on participating observation in the DPOD organization and close dialogue with its core actors of Disability Policy [macro level].

Through observations of the actual DPOD engagements for eliminating discrimination in built environments, the close relation allows practice related knowledge to be a part of the empirical source of knowledge [Nielsen & Nielsen 2016]. Empirical knowledge gained from existing research, observations and qualitative interviews with DPOD representatives and professional stakeholders from the construction industry is generating a perspective unfolding the experiences and present understandings of Disability in the collaborative relationship.

Knowledge is gained on daily participatory observations in DPOD, supported by interviews with twelve DPOD representatives and with representatives of six core organisations from the Danish building industry. The twelve chosen DPOD interviewees cover a group of impairments which are all interrelated with requirements of accessible design solutions, such as wheel-chair users, visually impaired, hearing impaired, speech-language impaired and intellectually impaired. On a later stage

participatory observations and interviews will be strengthened by case studies observing dialogue and user participation in building projects.

The methodology of interviews used in the PhD frame is semi- structured in depth interviews. This allows freedom for the interviewer and the interviewee to explore additional themes and change direction, if necessary. The method chosen, offers the opening to capture rich, descriptive knowledge of interviewee's attitudes and perceptions, and unfolding complex collaborative processes.

The questions asked touches upon notions of Disability, concepts of accessibility and Universal Design as well as the understanding of roles and responsibilities in the collaborative design processes.

The conducted qualitative research studies indicate discoveries which response to the questions of how dissimilar notions of Disability influence collaborations between users with impairments and the architectural field. Implications are that understandings of Disability and designing Inclusive Built Environments are closely interwoven in the collaborative process. Opposite views and positions hold back the dialogue. However the PhD project is still on-going, and the results presented and discussed here are preliminary.

4 Disability as understood in the architectural field

Despite examples of collaboration between the architectural field and the DPOD user group, it appears to be a challenge in Denmark to identify building projects that incorporate Universal Design values and meet the expectations of the user group. Architecture projects infrequently show an integrated and holistic approach when it comes to UD and accessible design solutions [Frandsen, et al, 2012] [Author & Frandsen, 2016].

This overall challenge stems from various obstacles of unclear interpretations of accessibility and UD, fragmented knowledge of accessibility and UD and undefined collaborative relations with the user group. Additionally, resent findings of the PhD research discover dissimilar notions of Disability in the dialogue.

The preliminary findings show at least two different understandings in the dialog between this user group and the architectural field. These dissimilar understandings appear to have a strong influence on the dialogue and even delay progressive collaborations.

Qualitative interviews with representatives of core organisations from the building industry and practicing Architects point toward the understanding that people with impairments are specific minority groups that somehow require specific attention to solve their individual Disability challenges in the Built Environment.

This understanding of Disability, by some means, parallels the Medical Models single-mindedness on the individual´s impairment and limitations. The Architect´s specific design solutions for specific people, becomes an "Architectural Cure" designed for individuals with impairments and not for all.

Responses from the interviewed Architects confirm this approach to Disability, in line with the view on diversity; *"How many disabled individuals are we talking about? Is it really fair that a small group of people with disabilities should have such a great impact on how we create architecture?"*

Understanding Disability, accessibility and Universal Design as a social aspect is not necessarily a part of the thinking or awareness of the Architect. Other research indicates a predominant focus on physical accessibility and the Building Regulations' prescriptive minimum requirements. This narrow understanding of accessibility has led to an approach, which somehow separates physical accessibility and architecture and to some extent, separates people with impairments from the rest of Society. This views result in "add-on solutions" in architecture, accessible design solutions applied in the final phases of projects. Add-on solutions do not necessarily correspond with other

architectural elements in the project neither are they responding to the manifold of bodies and varied abilities [Frandsen, et al, 2012].

Long-standing attention to the legislative interpretation of accessibility and UD, represented by rules and standards has led to critiques in the architectural field. This critical position develops from the view that the interpretation of physical accessibility and its codification in the Danish Building Regulation is a limitation of creative design processes and innovative thinking [Ryhl, 2009] [Kirkeby, et al, 2014].

We argue that these design solutions do not meet a philosophy which includes persons with impairment in Society as a part of human diversity; they are specific design solutions for specific people. From that perspective, required accessible design solutions only meet necessities of the few.

Absence of holistic Universal Design strategies and attentiveness of social relational understanding of Disability, in architectural education and practice, indicates a broader understanding of human diversity is yet to be implemented as social values and spatial quality in the architectural working method.

Importantly, this also questions functionality and efficiency of collaborative relationships with the particular DPOD user group. If users with impairments are understood as minority groups at “the outskirts of diversity” this understanding conflicts with the values of UD and the thinking of the users, themselves. Most people with impairments would reject the thought of being "abnormal" or outside social constructions [Lid, 2010] [Garland, 1996].

Qualitative interviews with representatives of DPOD member organisations and their user representatives show a general perception of being a part of Society and human diversity - being the same and different. Interview responses reveal interpretations of the Social Model of Disability; the challenges and solutions lie within Society and the environment. If the built environment cannot be used by persons with impairments it must be redesigned. This opposite position to the architectural field, suggest barriers for dialogue and hindrances for fruitful collaborative relationships.

This could point at a relational Model of Disability and the UD paradigm as a possible means to meet in ambitions to reduce body-based discrimination in social and physical constructions and support participation and daily life, not only for people with impairments, but for all.

5 The User Perspective

The Disabled People's Organisations Denmark (DPOD) defines their commitment to engage in efforts that serve to encourage and protect the rights of persons with disabilities. With the overall ambition to eliminate body-based discrimination in built environments and thereby improve independence and everyday life for persons with impairments, the Disabled People's Organisations Denmark takes

a political starting point in the United Nations Convention on the Rights of Persons with Disabilities. [http://www.handicap.dk/politik/].

The strengthening of the United Nations Convention on the Rights of Persons with Disabilities includes the approach of the Bio-Psycho-Social Model as well as Universal Design inspirations and values. The Rights of Persons with Disabilities emphasise equality, inclusion and the understanding that difference in ability is a natural and foreseeable human condition or experience.

Along with moving the perspective of limitations from the individual to the relation to the surroundings, the UN Convention not only makes clear that states should not discriminate against persons with impairments. The Convention also explains the many steps that states must take to establish an inclusive environment in order to let persons with impairment enjoy participation and equality in Society. From that perspective, physical barriers and limitations are first of all environmental and social challenges and Disability occurs when interaction fails. Although physical, intellectual, sensory or psychological variety may cause individual functional limitations or

impairment; these do not have to initiate Disability, unless Society fails to include people regardless of individual differences.

Universal Design principles are introduced in the UN Convention as means to generate Inclusive Environments which reduce barriers and limitations. UD responds to the awareness that accessible design solutions and Inclusive Built Environments should not only eliminate barriers for some, but enhance participation and experiences for everyone. Universal Design is referred to as a design strategy for urban planning, architecture and landscaping as well as strategies to meet external political and social aspirations.

Mirroring this, the social relational understanding of Disability is reflected in both the UN convention and the UD paradigm. In line with the Rights of Persons with Disabilities, UD values embrace the importance of participation and social inclusion and point out the importance of inclusive strategies as interaction between Society and individuals.

From this viewing platform, the Disabled People's Organisations Denmark (DPOD) are building the commitment and engagement to inspire and support Inclusive Built Environments, offering guidance and user perception in design and architectural processes. The organisation´s engagement is reflected at macro, meso and micro levels.

On macro level, with motivation to exert political influence DPOD´s political department embrace ethics, understandings of Disability and views on Human Rights. On meso level DPOD consultants debate political agendas with political decision makers and leave their mark on accessibility an UD through legislation and regulations.

On micro level, user representatives of DPOD share their experience of accessibility and Universal Design in collaborative relationships with Architects and stakeholders. The users representatives experience the functionality of accessible design solutions on their own body and in so doing they can contribute with experienced descriptions of design and functionality.

User representation in DPOD consists of volunteers, most often from local chapters of the main organisation, offering an individual user perspective to design and construction processes. Hence, the DPOD representatives should not be seen as professional consultants or as guarantors for the correct and legitimate design solution. The responsibility for meeting building requirements lies merely with the building owner/contractor and the professional consultants. User representation should support the professional design process, facilitating need-based knowledge and “one-to-one insight” of accessible solutions.

Facilitation offered by user representatives should be understood as a non-professional supplement disengaged of authorized or legitimate responsibilities. This understanding is confirmed and accentuated in some of the research interviews with DPOD representatives; other DPOD representatives find their role and competences unclear. A number of user representatives demonstrate how it is practically impossible to be spokesman of the large group of very different organisations.

Interviewees point out that impaired user representatives of member organisations often facilitate need-based knowledge based on their personal experience of the built environment having this particular impairment. On micro level it is a comprehensive task to facilitate and to guide on behalf of a large group of diverse people with a variation of impairments. It appears to be practically impossible to be a member of one particular user group and mediate very specific need-based knowledge and at the same time represent requirements of all DPOD members.

Findings points to an overall confusion regarding the role and responsibility of the user representatives in the architectural field and in the user group itself. As users of accessible design solutions, the DPOD user representatives are expected to possess certain knowledge of accessibility

and Universal Design. Nevertheless, as users of accessible solutions and UD, the user representatives are often mistaken for experts in accessible design solutions and building regulations.

Qualitative interviews with representatives of core organisations from the building industry and practicing Architects indicate the understanding that involving the DPOD representatives is a way of securing and approving accessible design solutions in architecture. This leads to misinterpretations of commitment and responsibility in the collaborative design process.

The experiences of misinterpretations are confirmed by the participating observations in the DPOD organisation. The narrative of "being taken as a hostage in the design process" is per se a well-known narrative in the user group and in the organisation.

The overall confusion regarding the role and responsibility of the user representatives is correspondingly present in the user group itself.

As a result, the DPOD user representatives generally appear to find support on meso level, in legislation and the current Danish Building Regulations. Interviews with the user representatives and observations in the organisation find the building legislation to be an important tool for the user representatives. Nonetheless, assuring appliance with the building legislation is not the responsibility of the user representatives, but the responsibility of the building contractors and their professional advisors.

When moving from micro level; facilitating need-based knowledge of "life with impairment" to meso level; mediating legislation and Building Regulations, the user representatives unintentionally emphasises their imprecise roles and responsibilities. Hence, user representatives by some means assume a role of professional Accessibility Consultants.

"We are very good advisors, the money which the Municipality spend on professional Accessibility Consultants is wasted. We could do this work ourselves". - DPOD user representative

Though well intended, movement between levels accentuates unclearness of roles and responsibilities as well as attention to accessibility as specific design solutions for individuals with impairments, and not for all.

This approach to user representation and focus on specific design solutions for individuals with impairments does not emphasise equality, inclusion and the understanding that difference in ability is a natural and foreseeable human condition or experience. Neither does it correspond with Universal Design strategies.

The approach creates a gap between the DPOD organisational starting point in the United Nations Convention on the Rights of Persons with Disabilities (and the UD paradigm) and the user representative´s attention to accessibility as specific design solutions for individuals with impairments. Recognising that the two parties work in different levels of the matrix, we suggest the gap can either increase from a statically understanding of Disability and accessibility or decrease from a broader understanding of human diversity, a dynamically understanding of Disability and Universal Design values.

Difference in physical characteristics of the body as a natural part of our lives and impairments viewed as a part of human diversity is useful knowledge, for the practicing Architects and the users to share. In the process of understanding Disability and translating desires into architectural form and function, the scope of reviewing impairment as a condition of human variety is useful for both groups in the collaborative relationship [Lid, 2010 Lid, 2012].

6 Perspectives: Advancing understanding of Human Diversity

Understanding of, and empathy with user groups is essential for creating new platforms for inclusion in design practice and for generating Inclusive Environments in collaborative relationships. Architects gain knowledge through education, practice and personal experience. Nevertheless, in specific

processes of designing, such as those involving participants who have significantly different needs from themselves, Architects cannot rely on past experience.

Understanding the complex implications of living a life with impairment is essential for Designers and Architects, in order to recognize, how accessible design and user friendly solutions support and inspire independence and empowerment. When living with impairment, independence and social interaction is reliant on accessibility, Universal Design thinking and functional architecture. Poorly functional design solutions and non-inclusive architecture hinder independence and opportunities to take part in ordinary life of the community on an equal level with others, due to physical barriers [Steinfeld & Smith 2012]. If we recognise that our physical environment holds the potential to be discriminatory we can do much to design and built for diversity.

Not all challenges deriving from impairments or bodily variations can be addressed, but findings of the framed PhD project point to the importance of recognising that Disability cannot be understood outside its social and physical context. As such, some of the assumptions about normality and difference, which underpin traditional thinking of Disability, are challenged.

Knowledge of modern dynamic perceptions of Disability, the relation between individuals and the social-environmental conditions plays an important role in the co-creation of Inclusive Built Environments. Implications of the PhD preliminary findings are that a social relational understanding of Disability built on participation, equal opportunity and interaction between the individual and the context is useful knowledge for users and practicing Architects.

New sorts of innovative collaborations between actors and the architectural field are suggested as possible means for a wider understanding of human diversity, including disability. Design forums, creative workshops and other dialogue processes in macro, meso and micro levels. Moving the collaborative relationship further than legislation and the current Building Regulations might open the way for new and subtle notions of Disability and Inclusive Built Environments. Rethinking Inclusive Architecture and embrace processes which include a wider range of heterogeneous users could encourage new understandings of Human Diversity as well as Disability and bring the architectural field closer to a Bio-Psycho-Social Model.

Furthermore, clear roles, well defined responsibilities and transparent positions in the matrix of levels [macro, meso and micro] point to a possible means to advance the dialogue toward an equal objective; to reduce body-based discrimination in physical constructions and thereby support participation and daily life for not only people with impairments, but for human multiplicity. Hence understanding how human diversity, accessibility and Universal Design are linked together in the notions of Disability is necessary. Given this degree of understanding, our future objective should be to develop and manoeuvre a cluster of models, which will empower people with impairments, giving them full and equal rights alongside their fellow citizens.

From this, the notion of reviewing impairment as a condition of human variety suggests a wider understanding of diversity and argues that as a strategy it can lessen architectural barriers and enhance quality of Inclusive Built Environments and equal opportunity.

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