

How to Solve Dilemmas Arising from the Idea of Improving Physical Accessibility in Relation to Aesthetics and Architectural Heritage

Sigmund ASMERVIK¹

The Norwegian University of Life Sciences, Dept. of Landscape Architecture and Spatial Planning, Norway

Abstract. The Norwegian state has been working for more than fifteen years on various ways of improving accessibility for the general public. An important part of this work has been to develop new legislation and other forms of formal guidelines to reduce physical barriers. The new Anti-Discrimination and Accessibility Act, Obligation to ensure general accommodation (universal design), came into force January 2009, and introduces some complicated dilemmas, especially when it states: “When assessing whether the design or accommodation entails an undue burden, particular importance shall be attached to the effect of the accommodation on the dismantling of disabling barriers, the necessary costs associated with the accommodation, the undertaking’s resources, whether the normal function of the undertaking is of a public nature, safety considerations and cultural heritage considerations.” What is an “undue burden” in relation to architectural visual qualities and to the historical heritage expressed in buildings and townscapes? This paper will look into these dilemmas by discussing specific cases from some cities in different countries. What kinds of procedure are suitable and decisive when it comes to these complicated questions? Is this a task exclusively reserved for professionals, or should the voice of lay people be heard and taken into consideration? By presenting examples from architecture and landscape architecture, I will show how universal design even can be implemented in old buildings and environments. The paper will argue for more focus on procedures than just physical solutions. The procedures should be based on accepted principles for changing historical monuments, such as wholeness, readability, reversibility and sustainability.

Keywords. Universal Design, discrimination, aesthetics, cultural heritage

1. The Norwegian Anti-Discrimination and Accessibility Act

The Norwegian government wants to avoid a way of thinking in which the individual is defined as the problem and in which special measures for people with disabilities are the main solution. The universal design concept chosen, is more or less an interpretation of the American understanding of universal design of the physical environment, should be arranged in such a way that the main solution of the building

¹ Corresponding Author, Griffenfeldsgt. 15, 0460 Oslo, Norway; E-mail: sigmas@mada.no.

can be used by as many people as possible. To quote Ron Mace, one of the creators and promoters of universal design, *“Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. The intent of universal design is to simplify life for everyone by making products, communications, and the built environment more usable by as many people as possible at little or no extra cost. Universal design benefits people of all ages and abilities.”* [1].

Universal design applies not only to people with disabilities but also to families with children in prams and elderly suffering from different kinds of impairment. The Norwegian government has agreed to comply with a number of international conventions; the UN Convention on the Rights of People with Disabilities, which was adopted by the UN General Assembly in December 2006, and which Norway ratified on 30 March 2007, and the UN Human Rights Convention, which includes a wide-ranging foundation for ensuring the rights of all people with disabilities, irrespective of their age, gender, sexual orientation or ethnic background.

In January 2009, the Act relating to a prohibition against discrimination on the grounds of disabilities (the Anti-Discrimination and Accessibility Act) came into force. The purpose of the Act is as stated in section one of the Act *“... to promote equality and ensure equal opportunities for and rights to social participation for all persons regardless of disabilities and to prevent discrimination on the basis of disability. The Act shall help to dismantle disabling barriers created by society and to prevent new ones from being created.”*

The Act stipulates a duty to universally design enterprises that offer products or services to the general public.

As stated in section 13 of the Act; *“Public and private undertakings that offer goods or services to the general public are obliged to ensure the universal design of the undertaking’s normal function provided this does not entail an undue burden for the undertaking.*

When assessing whether the design or accommodation entails an undue burden, particular importance shall be attached to the effect of the accommodation on the dismantling of disabling barriers, the necessary costs associated with the accommodation, the undertaking’s resources, whether the normal function of the undertaking is of a public nature, safety considerations and cultural heritage considerations.” [2]

We notice the formulation, *rights to social participation for all persons*, in section one. When we come to section thirteen, and a more precise formulation of the concept of universal design, it is expressed in this way: *“can be used by as many people as possible..... does not entail an undue burden..... the necessary costs and also safety considerations and cultural heritage considerations.”*

And it is precisely these dilemmas I will discuss in this paper by looking at some examples.

2. The Aesthetics of Functionality

We have noticed that ramps and stairs have been one of the very important architectural elements for thousands of years, dating all the way back to the Egyptians. Doors and handles show how architects and designers have thought of easy use. An example

could be handles designed by Alvar Aalto back in the 1950s. The one hand handle for the bathroom washbasin is a symbol of this way of thinking.

Functionalism started and evolved primarily as an aesthetic project dominated by a relatively small group of architects and artists in the first two decades of the twentieth century. We can look at the establishment of Bauhaus by the German architect Walter Gropius in Weimar in 1919, which later moved to Dessau in 1924, if we want to understand the development of what I call the aesthetics of functionality. Another dominating figure, the architect Mies van der Rohe, was also connected to Bauhaus for some time. Of the more well known artists, I can mention Wassili Kadinskij and Paul Klee. One of the most famous slogans of functionalism was precisely this: Form Follows Function. But this was a very mechanistic and biological understanding of function with models such as the automobile, the airplane and the ocean liner as inspirations for houses, more or less living machines, in the 1920s and 1930s. The individual, now free from religion and family, was looked upon very much as a physiological phenomenon. Sunshine, fresh air and “green lungs” were more than mere metaphors. The modernist movement and functionalism provide many examples of how architects expose the use of the ramp and the lift. One of Le Corbusier’s arguments for the Marseilles Unité d’Habitation was precisely the rapid lifts that could move people fast vertically, “You will have an elevator in motion (rising or descending) every 40 ft., that is to say, in a few seconds.” And we find the ramp used for access both for the Bauhaus building by Walter Gropius in Berlin and in Oscar Niemeyer’s buildings in Niteroi near Rio de Janeiro.

This idea of the “universal man” is based on an idea of a universal human being characterised by some universal measures of the body. This confirms that functionalism had no focus on social aspect

The Barcelona model for pedestrian crossing was consistently used with the same design for more than 30 000 curb cuts over ten years. The Stockholm model looks a bit confusing and it is hard to call it a beautiful design. The London example shows a random use of paint and colour at the pedestrian crossing. In Japan, the use of tactile and visual guiding elements is a strong impulse in the visual landscape, for example in railway station in Kyoto.

Have these ideas anything to do with the dilemmas of aesthetics and universal design as formulated in section 13 of the Norwegian Anti-Discrimination and Accessibility Act? Yes, it could quite easily indeed.

Is contrast marking of stairs and handrails at two heights not very aesthetic? Poorly designed stairs and a lack of contrast marking on glass walls and doors cause several accidents, many of them very serious.

3. Much about Accessibility and Safety, but Little about Aesthetics and Architectural Heritage

It is easy to understand the focus on accessibility and safety when working with the different juridical tools for the right for persons with some sort of impairment. Formulations such as removing manmade barriers of physical, economical and organizational character naturally have to use the accessibility views.

It is easy to understand for everybody that the door must not be too narrow, that a single step in the floor or the pavement is a barrier for a person using a wheelchair.

After 50 years we know quite a lot about the use of wheelchairs. This knowledge is already implemented in standards, acts and regulations with measures of doors, turning circles for wheelchairs and design guidelines for stairs and ramps. And it is easy to register if a doorway is too narrow or a ramp too steep. And in USA at least can give you good reasons to sue someone and take them to court. More difficult with argument of aesthetics and architectural heritage.

4. Cultural Heritage Considerations

There seems to be very different views on cultural heritage considerations in reaction to refurbishing historical monuments both indoors and outdoors in different countries and cities. Let us look at Barcelona, the city that was awarded the RIBA gold medal in 1999 for good architectural solutions when transforming the whole city after the fall of Franco in 1975. Even if there are many historical monuments in this city, it is quite obvious that *accessibility for all* has been given priority over historical conservation. I do not think it is a successful solution from an architectural and cultural heritage point of view, but it is an interesting example of how far some people are willing to take their radical solutions to secure accessibility.

On the campus of the Norwegian University of Life Sciences, one of the oldest buildings, dating back to the year 1900, had suddenly to close down its two upper floors in the summer of 2009 due to fire safety regulations. After a few weeks, prefabricated steel stairs to evacuate the building in case of fire, were added to the building. Many of us would describe this construction as quite ugly, especially from a cultural heritage point of view, and in addition, not very accessible at all. Would a similar solution for better access have been accepted, or would it constitute an undue burden?

I think these are good examples of how different acts and directives work, and how they are practised in different countries.

Unlike new construction where you can define general standards for specific physical solutions will be difficult to implement for listed buildings. To achieve good universal availability of listed buildings must treat each building unique. I believe this can be solved by creating a tool for a dialog between the stakeholders, by developing a procedure where the involved institutions and persons are involved.

And I think it is a good idea to work with language and concept that are understandable and useful. That means agencies for cultural heritage can use concepts from their definitions and formulations used for heritage management.

The Agency for Cultural Heritage Management City of Bergen has developed eight general principles for preserving and changing the use of historical buildings. [3]. The principles are:

1. *Wholeness* - It is of importance to think of the whole environment not just the single building or entrance in isolation.
2. *Addition* - When adding new solutions to old buildings it is highly important not to destroy any old traces. The new solution should be an addition not a transformation.
3. *Readability* - It is important that the history of the site is readable so that one can judge what is an addition and what is the original construction.

4. *Contrast and adaption* - In some situations it is better that the addition is in contrast with the old building to increase readability, while in other situations one want to adapt to the existing design to make a smooth (not so obvious) addition
5. *Design and visual expression* - The universal design solution has to be site specific so that it does not destroy any of the historical traces.
6. *Reversible* – It should be easy to remove the universal design solution and to go back to the original design if it is needed
7. *Sustainable* - It is important that the choice of materials do not destroy the original materials.
8. *Enriching* – The universal design solution should not only enrich the building by getting it more accessible but should also enrich the design of it.

These principles are not specifically related to universal design, but convincingly these principles can be used also to rebuild old buildings. According to Nilsen [3] making old buildings more accessible does not mean that the new solutions should be hidden. Instead, new solutions should add some new values. This way of thinking demonstrates how universal can become something more creative, rather than being just a burden.

5. Focus on Procedures

As mentioned in the abstract I argue that for historical heritage buildings, it is more realistic to develop creative solutions through the procedure, from the very beginning of a project, through designing and building procedure, and even post occupancy evaluations.

Refurbishing every existing building, very often have to end up with some kind compromises. For cultural heritage buildings, there is a need of finding unique solution as a result of procedures of discussions and mediations.

It is crucial that all stakeholders involved in the project, must be part very early in the procedure to define the target. This means that builders, planners, conservation authorities, consultants in cultural heritage protection, universal design designers and users should be involved as early as possible.

Some themes are absolutely fundamental to clarify at an early stage in order to achieve a qualitative good end result. Examples of such topics are:

- How to ensure clear lines of communication for prosecutors
- How to achieve a common understanding of needs
- How to ensure that designers have sufficient expertise in cultural heritage and Availability
- Should the design be a temporary or permanent solution

It also follows a suggestion for what is important to clarify in the early phase, the design phase and the implementation phase:

- Early phase
- What are the current laws and what provisions apply for protection?
- Which government manages the project?
- What is the building history?

- How is building going to be built; construction, technical solutions etc.?
 - What materials and craft techniques are going to be used?
 - How are the soil conditions?
 - Is the building of such a nature that it should be the goal of universal design or a level of lower accessibility?
 - What actions should be taken to improve accessibility for all?
 - What changes the least loss of heritage value?
 - What role is intended users views of the project?
 - Which organizational model safeguards best cultural heritage and accessibility?
- Is the project of such a size that feasibility study is needed?

Design phase

To achieve basic accessibility, the following points should be fulfilled:

- Ensure that all can come in and out of the building in an appropriate manner
- Horizontal circulation should meet the need for equal access to key features of the building
- Vertical circulation should meet the need for equal access to key features of the building
- Toilet facilities for all
- Ensure that proposed solutions are compatible with conservation

Implementation phase

- The following should be clarified before the start of the implementation phase:
- Procedures for monitoring the conservation values are safeguarded during the construction phase
- Procedures for post occupation control by users
- Procedures for handling unforeseen events that change the terms for access and conservation values

6. Summing Up and Concluding

The Norwegian Anti-Discrimination and Accessibility Act is very much influenced of the ADA legislation in the USA (4). But for different reasons, especially the practice of the Act in Norway, it is very different. Very important to notice it is fairly common in USA to take people or companies to court. And many companies are frequently fined, with quite a considerable amount.

In Norway, so far as I know, no persons or companies have been taken to court, and no one have fines. The main reason for this, I think, is just because of the concept *undue burden* in section 13 in the Norwegian Anti-Discrimination and Accessibility.

Also unlike the ADA, the Norwegian Anti-Discrimination and Accessibility Act also focuses on costs and safety, and on the issues of aesthetics and cultural heritage.

The considerations, discussions and debates of the meaning of *undue burden* lead us into different complex dilemmas.

If we look back on the development of modernism and functionalism in the first half of the 20th century, we have experienced many examples of the use of the ramp and the lift as visual elements in the new architecture. Today's understanding of universal design and accessibility *for all*, is very often not seen the drawing screens of the architects. Even if it is fairly easy to argue that the cost of introducing the principle

of universal design is very modest, if the principle is taken into consideration at the very start of a project. Safety is a question that always has to be taken into consideration.

But the most complex dilemma, I think, is related to the issue of cultural heritage. Here we see different attitudes in different countries. The Barcelona planning for accessibility for all seems to have very strong emphasis on the functionality of today, whereas the Norwegian cultural heritage authorities have a very strong voice when decisions are taken in universal design issues related to heritage objects and areas.

If I dig right to the very bottom of my experiences over 20 years, and reflections on the implementation of the ADA, I end up with the two concepts of *rights* and *responsibility*. These are the two concepts that I believe constitute the very core of the matter. I think the whole campaign for the Civil Rights Act in 1964 was a matter of rights, of gaining rights.

I think the more general discussions on the topic of rights versus responsibility are very relevant when working with the issues of disability and universal design. The development of disability legislation in different countries over the years has a very clear focus on rights. During the last ten years most of this legislation in different countries refers to the United Nations Declarations on Human Rights.

But once you have obtained a right, the question of responsibility is never far behind. Otherwise, we end up overwhelmed by time- and money-consuming procedures in court.

An extensive use of rights can sometimes be a feature of a young and not very mature. In a more mature culture, and what I would like to call, more humane community, we will often find a more common understanding of the different needs of individuals, and then the need to continuously demand one's rights would not be so strong.

In such a community, values and ethics are more important, and here we likely will find that there is more focus on responsibility than on rights. And I wonder if the time has not come for us to also start a debate on a UN Declaration of Human Responsibility. In such a society, I think we would also find good aesthetic solutions based on the principle of universal design. For at the essence of these different dilemmas I have discussed here, is that we end up precisely with the question of quality that always includes aesthetics, sound economics and safe and resilient solutions that really should be a tempting challenge for new generations of architects, landscape architects, engineers, city planners and industrial designers, and where the consideration that persons with different impairments will contribute as elite users should be a natural part of the creative process of design and production.

That means that stakeholders representing agencies for cultural heritages and people from users organisations should be more open for discussions to obtain consensus at an early stage of a project to solutions based on compromises from all part. And the road to this goal, I think, is to work with language and concepts which are understandable in a way that good and creative solutions can be obtain to the best for the perspective of aesthetics, preservation and physical solutions for all.

References

- [1] The Center for Universal Design, http://www.design.ncsu.edu/cud/about_ud/about_ud.htm, 2010.

- [2] The government. ,Lov om forbud mot diskriminering på grunn av nedsatt funksjonsevne (diskriminerings- og tilgjengelighetsloven) (the Anti-Discrimination and Accessibility Act), Barne- og likestillingsdepartementet. 2009
- [3] Arve Nilsen, The Agency for Cultural Heritage Management City of Bergen, oral presentation 2011.10.14 at campus UMB.
- [4] Department of Justice, Americans with disabilities act, ADA, <http://www.ada.gov/pubs/ada.htm>, 1990.