Standards as Social Design Practice:

From the Americans with Disabilities Act to the Accessible Icon Project

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Abstract

This article examines the role of social concerns in the development and enforcement of standards. The *Americans with Disabilities Act of 1990,* developed following the fight for equity by disability rights activists, has led to more inclusive environments through the use of ANSI standards – a case that highlights the social origins and impacts of national standards. The challenge for designers and standards organizations then becomes the integration of social concerns into the revision and application of such standards, a challenge successfully addressed by the Accessible Icon Project (AIP) in redesigning the International Symbol for Accessibility. The AIP integrates critique and dialogue among various individuals and institutions into design and standards practice, a methodology that this paper will argue can lead to a more iterative, open, consensus-based approach to the development of standards that can improve the inclusiveness of built environments.

Introduction

The *Americans with Disabilities Act of 1990* (ADA) codified the commitment of United States businesses and society at large to the construction of more accessible, inclusive environments. Standards from developers that are accredited by the American National Standards Institute (ANSI) have facilitated this commitment and challenged designers to continue the integration of standards into design practice. The social impacts of the ADA's inclusive standards have already been significant and widespread, with conformance by private and public institutions across the United States. The case of the Accessible Icon Project (AIP), a new initiative by American designers described in this paper, illustrates how standards can further the goal of creating more equitable spaces by accommodating critique, adaptation, and the inclusion of context-specific concerns into standards production. Designers are thus challenged to think critically and continuously about the social origins and impacts of standards in order to iterate upon the design of objects and spaces that may bring equity for persons with disabilities.

The Social Origins and Impacts of Standards

ADA standards have facilitated the address of many of the material, social, and economic concerns of disability rights groups. Before ADA standards were created and enforced, the nation's built environment commonly excluded individuals through barriers to physical accessibility. These obstacles included issues of personal mobility and access, such as the absence of ramps for wheelchair access, for those with impairments in a multitude of public and private settings ranging from schools and restaurants to parks and even hospitals. The disability rights movement, made up of activists and advocacy

groups, fought to have standards put in place that would ensure more equitable spaces for individuals with disabilities (Mayerson, 1994). The result in the United States was the ADA and the standards that serve as a method for disseminating and regularizing more inclusionary designs. Once private companies and public institutions complied with the ADA drafted standards precipitated by the social movement's initiatives, the resultant social impacts were significant and widespread.

The ADA's enforcement of standards has provided inclusive environments where more individuals can navigate from public streets up to and inside of public or private buildings. For example, standards for the width and slope of curbside ramps ensure easy traversal by a variety of wheeled and non-wheeled modes of transportation (ANSI/ICC 2009, 24). Turning spaces for ramps leading up to buildings, and the hallways inside, must be a minimum of 60 inches in diameter (ANSI/ICC 2009, 8). These standardized practices are intended to work across a wide array of institutions, no matter the function or nature of the space at hand. While many of the standards take as their mandate increased accessibility for individuals in wheelchairs (represented by the figure in the symbol that labels such accessible routes), they are in fact also more inclusive of people using strollers, handcarts, white canes, or walkers. Although the social aim of these ADA standards for accessible routes is clearly one of achieving the widest possible inclusion, we can make ourselves accountable for the fullest actualization of that goal by maintaining a critical approach, an example of which follows.

The International Symbol of Accessibility (ISA) is a standardized form that signals the availability of an accessible route, but also serves to represent visually those whose

inclusion is made newly possible in the built environment through the application of standards like those enforced by the ADA. The ISA, a familiar image today, depicts a person sitting erect in a wheelchair, arm extended perpendicular from the body, leg bent in front of the chair (fig. 1). The form of the human figure in this icon adheres to International Organization for Standardization (ISO) standards to ensure a recognizable figure across social settings (ISO 2007a, 20). Furthermore the line widths and dimensions of the figure are standardized to maintain legible signage, which we can see as another method of ensuring inclusion (ISO 2007a, 5). However, as the ISA is a single, internationally recognizable symbol, it does not accurately represent all individuals who may benefit from the accessible routes it signals, nor could it do so, since at one point or another everyone (as they age, for example) may benefit from these standards. By focusing on the universality of the social benefits of ADA standards and the ISA, we can begin to address ways that the symbol itself, and the standards it signals, can become more equitable.

Figure 1

INTERNATIONAL SYMBOL OF ACCESSIBILITY

ACCESSIBLE ICON PROJECT

The Accessible Icon Project

The Accessible Icon Project (AIP) was developed in 2010 to leverage the broad potential of ADA standards to forward the national commitment to inclusive social environments. The AIP, initiated by disability rights activists of the U.S. non-profit organization Triangle, began with the recognition that the way the ISA attempts to represent individuals with disabilities leaves an impression of motionlessness and immobility (Hendren 2013a). The erect back and extended arm of the ISA imbue a sense that the figure is stationary and static, as opposed to the actual experience of using a wheelchair for transport, which is undertaken in a forward leaning position (ISO 2007a, 18). The AIP iterated on the designs of street artist projects to alter the social meaning of the familiar symbol while still adhering to established international standards. The ISO standards followed in this case include those governing the depiction and adaptation of human figures with the use of "dynamic depictions of activities or actions" that convey the "movements or positions involved in the action" (ISO 2007a, 5). This "adaptation" of the familiar ISA imparts in the figure a movement and autonomy lacking in the original (fig. 1). Thus an individual with a disability is given in the AIP's symbols a radically new persona: one with intention and agency.

The new symbol presented by the AIP reflects a shift in how we understand disability from the medical model to the social model, a recent cultural change described by historians and sociologists of disability. While the medical model of disability, dominant in the United States for many generations, places disability in an individual's physical impairment or difference, the social model shifts the cause of physical limitations to the

disabling effects of a given social environment (Carlson 2010, 5). The enactment of the ADA overcame *some* of these disabling effects, but the figure represented in the ISA continues to reflect the immobile and passive understanding of disability supported by the medical model. Like the old version, the new symbol presented by the AIP still cannot represent all of the people who benefit from the ADA, or all people who identify as individuals with disabilities, but as Sara Hendren, co-founder of the AIP states, "Our symbol speaks to the general primacy of personhood, and to the notion that the person first decides how and why s/he will navigate the world … The chair itself is secondary" (Hendren, 2013b). Thus the revised symbol does not try to represent everyone, but instead attempts to recognize the agency and autonomy of every individual.

The AIP produced a new image and iterated on an existing standard: the overall purpose of the project, however, was somewhat larger. The AIP attempted to create generative friction; that is, the group sought to bring about thoughtful dialogue and debate on issues of inclusion among activists, disability rights advocacy groups, designers, and the private companies and institutions that considered adopting the symbol. The friction created by changing a longstanding, standardized symbol with very wide recognition necessarily brought about conversations and served as an entry point into discussions around social impacts of the standard between activists and institutions who would adopt the new symbol.

Standards – Now and Moving Forward

As the ADA has shown, standards can effectively disseminate, unify, and regularize optimized designs for the built world in order to bring about a desired social impact such

as the construction of more inclusive environments. Bringing together the social aims of activists, advocacy groups, and designers can allow for the desired change to be defined and codified in American National Standards and ISO International Standards. As these standards are regularized and enforced through legislation such as the ADA, they can be implemented more quickly across various disciplines and public and private institutions. When standards are made international through the ISO, they can then be disseminated not only across diverse institutions, but also across national boundaries, making their social impacts reach considerably further than would otherwise be possible.

Of critical importance here is the recognition that the extensive unifying action of American National Standards, while powerful, can sometimes overlook the possibility of local adaptations that leverage more flexible standards. These local adaptations can enhance the effectiveness of standards. In the case of the AIP, designers altered the design in specific geographic contexts that had less stringent enforcement standards. In Massachusetts, where there are no limitations on color combinations for the ISA, for example, the AIP developed an alternate version of their symbol that utilized higher contrast colors (Triangle 2014). This made the signage more legible, especially for individuals with impaired vision. The increased legibility of the alternate symbol colors subsequently increased the inclusiveness of the environment by making accessible routes easier to locate and follow for all persons with disabilities, and arguably for all users of the environment. Thus the flexibility of standards, not their delimitations, allowed the standards to function as a platform from which designers could iterate and develop new, more inclusive designs.

Crucially, we can see with this example that standards can more readily achieve desired social impacts by accommodating critique, adaptability, and revision. The successful process used by the AIP to increase inclusion and access through the practice of standardization and design is one that can be applied elsewhere, and is already presented as a possibility in ISO standards. The adaptation of existing standards to better represent certain movements and activities is laid out in ISO 22727:2007, *Graphical symbols -- Creation and design of public information symbols -- Requirements*. In Annex C of this document, for ensuring the comprehension of public information symbols of human figures it is advised to use specific, dynamic depictions that represent the nature, direction, movements, and positions of a given action (ISO 2007a, 18). This framing can be extended to acknowledge the specific material conditions and embodied experiences of those who will encounter standards, a significant step towards more effective and inclusive standards.

Conclusion

ANSI expresses a commitment to the values of openness and consensus among all stakeholders in the development of standards (ANSI 2009, 6, 8). As the successful case of the AIP's symbol redesign demonstrates, this goal can be readily achieved through a critical, reflexive, and socially informed study of standards. Such a study does not ensure smooth compliance across a broad range of institutions, but rather challenges the meaning of known forms and their uncritical acceptance. The generative friction this critical process creates can leverage the broad reaching impact of standards to better represent diverse views and challenge prevailing social perceptions that inhibit the

development and design of more equitable spaces. Moving forward, practitioners of design and standards production alike can learn from this model of engagement and further the aims of ANSI in representing all stakeholders, as well as the goals of the ADA in building a more inclusive environment and society. We must recognize that like the user of a wheelchair, social understandings are not static but dynamic and constantly in flux. Thus, designers may meet this challenge by developing standards that reflect the dynamism of society through a process of continuous, critical iteration and revision.

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