The challenge of inclusive design in the US context

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ARTICLE INFO

ABSTRACT

The paper considers the evolution of thinking and practice of inclusive design in the United States since 1993, the year of the first special edition of Applied Ergonomics on inclusive design. It frames the examination initially in terms of the US social mores that substantially influence behavior and attitudes from a defining individualism to legal mandates for accessibility to the nation's ingrained obsession with youth and delusional attitudes about aging. The authors explore the disparate patterns across the design disciplines and identify promising linkages and patterns that may be harbingers of a more expansive embrace of inclusive design in the years ahead.

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1. Introduction

The evolution of universal design in the United States since 1993 is studded with impressive milestones that include the development of the Principles of Universal Design in 1997 and the publication of the tour-de-force Universal Design Handbook in 2000 and the second edition in 2010. The original coterie of committed leaders from a small number of public, academic, private and not-for-profit entities has expanded and generated a growing set of specialists in particular areas of focus such as universal design for learning and universal design for housing policy. The terminology and rationale of universal design has become more familiar to more Americans. Universal design/inclusive design are used interchangeably in this essay and defined as a framework for the design of places, things, information, communication and policy that focuses on the user, on the widest range of people operating in the widest range of situations without special or separate design. Universal design starts on a floor of accessible design and calls for a more creative and imaginative engagement of designers to design places, products and experiences that will work seamlessly across the spectrum of ability, age and, increasingly, culture to facilitate and enhance everyone's experience.

All co-authors are or were with the Institute for Human Centered Design (IHCD), founded in Boston, Massachusetts in 1978 as Adaptive Environments. IHCD is an international non-governmental education and design organization committed to advancing the role of design in expanding opportunity and enhancing experience for people of all ages and abilities through excellence in design. IHCD's work balances expertise in legally required accessibility with promotion of best practices in human-centered or universal design.

IHCD is the oldest and largest organization in the US whose mission focuses on inclusive design and has been a leading organization in the US and international Universal Design movement. It was one of five organizations that developed the Principles of Universal Design in 1997 that are copyrighted to the Center for Universal Design at the State University of North Carolina at Raleigh. IHCD has hosted or co-hosted five international conferences on universal design as well as international student design competitions, national and regional meetings and publication of web and print materials. IHCD also provides consultation, user-expert research and design services in the built environment, products and services.

1.1. The US context

Despite progress, universal design has not seized the American popular imagination nor shaped the personal or professional identity of most designers. From a 2010 perspective, one must contrast the incremental growth of universal design with the steroidal explosion of attention and commitment to environmental sustainability in all facets of design from urban design to graphics. In short order, design schools are reinventing themselves as sustainability hotbeds, design practitioners are trumpeting their bona fides to prove their passionate commitment to environmental sustainability, and towns and cities are putting into place policies on sustainability and incentives to achieve measurable goals. Clients, often assumed to be slow to embrace innovation, are demanding environmentally sustainable design solutions today that exceed last week's best

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practice. Businesses are branding themselves as 'green' in their products and services. New green businesses proliferate exponentially, fueled by the heady mix of excitement and appetite.

Obviously, a sense of urgency underlies the dramatic attention to the role of design in saving the planet – global warming, shrinking energy sources, rising prices. Universal design has its own claim of urgency but it requires a conversion to reality from the long-standing US obsession with youth and the prevalent delusional attitude toward the realities of aging. Summoning attention to the ordinariness of functional limitations, especially in relation to age, is overdue and critically important to the US economy over the next thirty years. Substantive progress in making a resonant case for the potential of design to minimize limitations and enhance strengths remains elusive. However, there's increasing evidence that there's a new cachet to making 'smart' consumer choices and adopting 'socially sustainable' lifestyles and policies. A strategy to embed inclusive design into socially sustainable design is already common in some sectors and may prove practical in others.

It is useful to consider the particular demographic reality of the US. The Census Bureau released the highest estimates ever in January of 2009 for the population of people with disabilities: 54.4 M Americans (19% of the population). Today's 36 M Americans over 65 will be dwarfed by the 79 M "baby boomers" born between 1946 and 1964. If current patterns hold, the US will grow larger (392 M by 2050) and somewhat older (median age increases from 34.0 in 1994 to a peak of 39.1 in 2035) but large US immigration patterns distinguish it from Western Europe or Japan. Immigration is the primary demographic driver relative to absolute population as well as to the racial and ethnic diversity of the population. Non-Hispanic Whites, the slowest growing population group, is projected to comprise less than 53 percent of the total population by 2050. There is no ambiguity that diversity in all its manifestations defines the nation.

Why do the demographics matter in understanding American attitudes toward universal design to date? And what potential opportunities might they present for future prospects in the US for promoting design that includes?

We suggest that two factors have constrained the growth of universal design in the US to date, both endemic to the US culture.

1.1.1. Attitudinal barriers

The US national identity is defined by individualism, autonomy and a fixation with youth. Dating back to the 1830s and Alexis de Tocqueville's Democracy in America, he described the "habits of the heart" he found in America that shaped the American character. He was the first to use the term *individualism*, which he noted as largely positive but which he feared could isolate Americans from one another if a balance with commitment to community was lost. Given patterns of development in where we live and how we live, individualism has mutated for many Americans to a defining sense of autonomy. We not only are not our neighbor's keeper; we don't even know the neighbor's name.

And, in a culture where many people have little exposure to extended family, we've come to think of aging as discretionary. An ever-expanding advertising tsunami tells us that defying aging is not only desirable but also feasible. This fanciful notion, paired with pervasive negative attitudes toward aging, intersects with our free-market healthcare system. Despite a rapidly growing elderly population, the number of certified geriatricians fell by a third between 1998 and 2004. Applications to training programs in adult primary-care medicine are plummeting, while lucrative specialties, like plastic surgery, receive applications in record numbers.

The US has not been motivated by aging demographics nor is it given to framing priorities in terms of collective interests.

1.1.2. Accessibility, the law, unintended consequences and the ICT alternative

The US was the first nation to fully embrace and codify design as a civil right for people with disabilities. For most Americans, accessibility is understood from a legal rights and responsibilities framework. It's about the law and not about design. For those with responsibilities stipulated in accessibility code such as architects, engineers and owners, an unintended but undeniable outcome has been the 'just tell me what I have to do' problem. Guidance is understood not as minimum requirements, a 'floor' of design that anticipates a wide variety of users but, as code, an external burden that requires accommodation but is not about the design process any more than the electrical or plumbing code.

There is an alternative way of establishing guidelines for the design of information and communication technology that points to a more effective guidance model that can be integrated into the design process: accessibility standards for Section 508 of the Rehabilitation Act and Section 255 of the Communications Act of 1996.

This is a fundamentally different model of establishing accessibility expectations at the federal level. The guidance does provide minimum required technical specifications but it also introduces performance-based requirements based upon the functional capacity of the covered technologies. It assumes that technology is dynamic and continuously evolving and that performance measures can be responsive to an evolving knowledge base. This guidance has produced a *positive* unintended consequence: even without establishing new broad-based obligations in the private sector, it seems to have functioned as a stimulus to awareness and innovation in a constantly widening spectrum of Information and Communication Technology (ICT).

However, the 2010 ADA Standards for Accessible Design again set minimum requirements, both scoping and technical, for newly designed and constructed or altered State or local government facilities, public accommodations, and commercial facilities. Performance measures are not used and the complexity of understanding one's responsibilities multiplied significantly.

1.2. Inclusive design in the US through the lens of the design disciplines

Beginning with a general overview of the status of design education in relation to universal design, we offer a snapshot of the status of the design disciplines in relation to universal design: product and technology design, architecture, interior design, and urban planning and design. These disciplines were chosen because of the prevalence of US practitioners paying heed to universal design in these areas. Inevitably and regrettably, we give short shrift to other disciplines, most especially print, digital and environmental graphics but the US is just beginning to innovate in this area. In each case, we will consider the context with attention to legal obligations and attitudinal barriers.

1.2.1. Design education

Universal design has limited infusion into professional design education in the US. Currently, the only documented teaching of universal design is by faculty who had been supported by the Universal Design Education Project (UDEP) or faculty in the College of Design at North Carolina State University. UDEP supported faculty from 25 colleges and universities in their teaching of universal design from 1993 to 1996. The multi-disciplinary group included architecture, industrial design, interior design and landscape architecture. A program of Adaptive Environments, now the Institute for Human Centered Design, it was supported by grants from the National Endowment for the Arts, the United States Department of