Understanding ADA, UD, Visitability, and Enabling Design article

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Challenging the Status Quo

By Esther Greenhouse, MS

You have likely heard the term *universal design.* It refers to the design of products and environments to be usable by all people, to the greatest extent possible, without the need for specialized design. That is according to the RL Mace Universal Design Institute (udinstitute.org), a North Carolina nonprofit.

Still, the application of universal design is lagging behind the need. The norm in our society is to conflate UD with disability and frailty. We view people with disabilities as "other," as a discrete subset of the population.

This view, along with unfamiliarity with universal design concepts, is the biggest barrier to applying UD principles to the design and construction of actual communities.

In the course of my practice as a designer and environmental gerontologist, I encounter two familiar refrains: "It would be nice to address their needs, but we cannot afford to design and build for a subset of the population, for an occasional user."

In truth, we're already designing for a subset of the population — people of average height and reach (often male), and the highest sensory abilities. Everyone else has to adapt. UD means expanding the range of citizens whose needs are properly designed for. In fact, designing with all users in mind minimizes the need for accessible design.

Then there is this: "What about the ADA?"

The Americans with Disabilities Act Accessibility Guidelines are valuable for removing minimum barriers to access for people with disabilities. But they don't enable or encourage designs beneficial to all users. And some spaces designed or retrofitted to those standards — if they are retrofitted at all — can be difficult and awkward to use. Finally, ADA guidelines do not apply to single-family homes, and typically only result in five percent of federally funded units in a building or development being accessible, per rules set by the U.S. Department of Housing and Urban Development.

ENVIRONMENTAL PRESS

The design of our built environment impacts our level of functioning and well-being. This can be explained by the theory of environmental fit and press. A good environmental fit enables independence.

When there is poor fit between a person and their environment, the environment is a stressor, pressing down on their abilities. The theory of environmental press was first articulated by psychologist and aging specialist M. Powell Lawton in the 1970s. Here are some examples:

- poor lighting (low levels, glare, uneven lighting)
- lack of safe-haven medians in a crosswalk

- auto-dependent communities
- stairs for those who cannot use them because of physical abilities or functional needs (carrying heavy items, pushing a stroller)
- lack of easily reachable storage for shorter or taller people
- round doorknobs for persons with smaller hands, reduced strength, shoulder injuries, reduced grasp

Ideas to Consider

Our society's conventions for the design and construction of housing, infrastructure, and public spaces don't work for everybody, but planners and municipalities have opportunities to change that. It starts by understanding some of the impacts of the built environment.

The status quo of the built environment is not benign. Much of our built environment is designed to suit average adult human dimensions and for people with the highest sensory abilities. Not everyone fits into that group, which means a lot of the population — from children to both short and tall adults to people with disabilities — has to adapt.

The built environment, well designed or not, impacts our behavior and functioning. When there is a gap between what the built environment asks of a person and the person's needs and abilities, the design can push that person to an artificially lower level of functioning. This may cost both the individual and society because of the need for supportive services to bridge the gap.

Planners already know some of the negative impacts of the built environment on citizens' behaviors and functioning. Since the Highway Act of 1956, we have designed and regulated our communities and transportation to put automotive travel first, creating a form of "environmental press," where car-centric, artificial environments place few physical demands on our citizens — leading to obesity, decreased social interaction, and fewer eyes on the street.

In addition, the resulting intersections, streets, and public spaces are designed for the needs and scale of vehicles, not human beings. In recent years, the planning and public health professions have begun to address these issues, but there's more to do. The next time you are involved in the redesign of any of these spaces, ask yourself: "How are we designing this to meet the needs of all human users and vehicular traffic?"

Designing excellent, ability-inclusive places is smart for the long term. Designing in a way that is inclusive and serves everyone is sustainable and should be the ideal. Fortunately, there are options to do so. A kneeling bus brings the vehicle down to curb height, is a help for wheelchair and walker users, as well as people with strollers, bicycles, suitcases, and just about everyone else. The same is true for a zero-step entry to a home or public place.

Designing for a range of sensory abilities is crucial, too, particularly when we consider that measurable, normal, age-related sensory changes are present in most individuals in their 40s. Around that age, for example, a human's ability to see close up is diminished, resulting in difficulty reading. Reading glasses and technology that allows users to enlarge text and other visual information on digital devices helps. Hearing loss is another age-related factor, but it is harder to mitigate (hearing aids are expensive and require months of professional fine-tuning).

The solutions? When we design, we should offer both adjustability and redundancies, so that we can provide information to more than one sense.

Catering to one group artificially lowers functioning for those forced to adapt. Nowhere is this more clear than in the case of our burgeoning senior population. Poorly designed environments are barriers to full, independent functioning, which makes older people more reliant on others to fill in the gap. Further, changes in mobility and working patterns mean that the traditional providers of that support — younger family members — are less available to help. Fortunately, a community can address this by encouraging the development of universally designed and visitable housing, as well as creating walkable communities where nondriving citizens can access healthy food and key services.

Universal design benefits everyone. Often an excellent way to communicate this is to focus on *behaviors or conditions*, not on people's abilities. For example, a zero-step entry into a home is for nonclimbing access: wheeling (as in a wheelchair, bicycle, stroller, or dolly) or walking while carrying a heavy or wide load (a sleeping child, furniture, or packages). This can become a reality in your municipality with the adoption of a universal design or visitability ordinance.

Until citizens, practitioners, and municipal leaders understand that our current built environments are failing us, the adoption and application of UD will continue to lag. As cities update their comprehensive plans, develop zoning codes, and draft design guidelines, they have the perfect opportunity to create properly designed, sustainable communities that enable citizens of all ages and abilities to thrive.

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WHAT IS VISITABILITY?

The Term refers to home design that is accessible to inhabitants and their guests, regardless of ability. According to Visitability.org, hosted by the National Council on Independent Living, a house is visitable when it has:

- one zero-step entrance
- doors with 32 inches of clear passage space
- one main floor bathroom that is wheelchair accessible

Go to visitability.org/policy-strategies for examples of visitability ordinances and additional information.