

BARRIERS TO UNIVERSAL DESIGN IN AUSTRALIAN HOUSING

Jane Bringolf

Urban Research Centre, University of Western Sydney, Australia

INTRODUCTION

The way a home is designed can make the difference between living independently at home in familiar surroundings, or needing to move to specialized accommodation or institutional living. In one respect universal design in housing already exists – they are the universals currently adopted by the industry. However, small, cost neutral, but important changes to these universals can make Australian housing more flexible and adaptable to suit the real lives of occupants.

While it is technically feasible to include features such as level access and wider doorways, developers and builders appear reticent to change their practices to suit the changing demographics and the social inclusion agenda. The question of “why” therefore became the focus of this study - to identify the barriers to the uptake of universal design in mass market housing. Although little can be done for existing homes unless homeowners can afford to pay for renovations or modifications, there is a case to be made for all new homes to be universally designed so that more people can maintain their independence regardless of their age or physical capabilities.

BACKGROUND

In general terms, the Australian house-building industry is showing some goodwill towards the idea of incorporating universal design features into new homes, but there is little evidence that such features will appear in new homes any time soon unless they are imposed by regulations.

Explaining universal design is one of the concept’s major stumbling blocks. Although its basic philosophy is inclusiveness, those who are most often excluded by design have become the focus of the concept. As a result, the

universal design is perceived as a design template for people with disabilities or older people. Nevertheless, it is through the eyes of people with disabilities that the barriers are most apparent. A parent might be prepared to carry a pram up steps, but this is not an option for users of wheelchairs or walking frames. Consequently, those who are most regularly excluded by design are its strongest advocates. This explains why universal design is translated as “disabled design”, and as a result of stereotyping, has received little attention. Another criticism is that one hundred percent inclusion is impossible, but this should not prevent designers from striving for the ultimate through iterations of their designs over time.

In Australia, the design and construction of the public domain is subject to regulations that demand ‘disability access’, but private homes remain outside the scope of such legislation. Consequently, a person might enter a public building but not their neighbor’s home, or perhaps find themselves imprisoned within their own home. Although some new dwellings are designed with an ageing population in mind, they are largely restricted to infill sites where local authorities demand a small proportion of new dwellings meet the adaptable housing code and be set aside for purchasers over fifty five years of age. Similar design requirements, however, are not applied to detached family dwellings in large-scale land development sites.

A twenty percent rate of disability within the Australian population [1] is an insufficient measure to account for the full impact of disability on families, physically, socially and economically. There is a 60 percent probability that a single-family unit built today will accommodate at least one resident with a disability during its expected lifetime. When visitors with a disability are included, the probability rises to 91 percent [2]. This analysis by family and by dwelling avoids a static view

of peoples' lives which encourages proportion arguments, that is, the number of dwellings suited to people with special requirements should equal the number of people with those requirements. Housing and households each have life-spans that move through time. A household or house without disability present today may find that changed tomorrow.

THE RESEARCH PROJECT

The study focused on industry perspectives and included property developers, planners, regulators, architects, project home builders, building designers, engineers and surveyors. For additional contextual information an exploratory survey of new home owners was also undertaken as well as in-depth interviews with wheelchair users who had recently built a house. The focus here is on the findings related to the house-building industry.

Language and terminology

Australian building codes and planning policies abound with terms that infer special designs for separate groups of people: accessible, adaptable, visitable, universal, 'disabled', seniors, and aged [3]. Truly inclusive designing would not need special terms and therefore no discussion would be necessary. But, without a suitable and agreed lexicon, appropriate policy development and academic debate is hindered. A lack of shared understanding and tendency to use terms interchangeably was also apparent in the way industry respondents utilized terms.

Most industry participants gave a fair description of universal design, but throughout the interviews, concepts were transformed into terms found in codes and regulations related to ageing and disability. This is not surprising because codes and regulations include terms such as "disabled toilet", "disabled ramp", and "disabled parking". In reflecting societal attitudes, thinking processes have changed 'disabled' from an adjective into a noun, and now 'universal design' is used as a catch-all term for any type of housing suitable for people with disabilities and older people. The case for universal design is therefore working for inclusion against a backdrop of entrenched social and physical separateness.

Perceived additional costs

In general, there was a belief that universal design costs "a lot more" (although no evidence was provided). Given the confusion over terminology, it is predictable that costs were assumed to be greater. If 'disability' access in public buildings is treated as an afterthought, it will be perceived as a 'disability extra'. It is also likely to cost more if changes or additions to design are needed. If this notion is extrapolated to housing, industry would naturally assume an increase in costs. Housing designed to the adaptable code often includes more expensive features, particularly those related to the kitchen. So, if universal design is considered as another term for adaptable housing, it too would be considered more expensive.

In contrast, the New South Wales State Government land development corporation [4] found that it costs one to two percent more in construction costs to re-configure existing project home designs to include universal features. They also found that if these principles were considered from the outset, the cost was virtually nothing.

Societal attitudes and marketing practice

Appealing to consumers for design change based on notions of a less capable self are not likely to succeed, and consequently any demand is unlikely to come from consumers. Yet consumer demand was cited by industry players as a major force for change.

Property developers and project home builders in particular, often referred to their "housing products" and thus marketing theory and practice is introduced into the debate. Life cycle theory segments consumers into: Fledgling Teens and Early Twenties; Courting, Nest Building, Full Nest, Empty Nest, and Sole Survivor [5]. This classification rests on assumptions that products can be produced to satisfy each of these archetypal groups at certain stages of life, and marketing professionals develop a program of product development and advertising accordingly. This fits with the notion that young couples, established family groups, and older people will require different types of accommodation.

Consumers' decision making processes are often less than rational. Beliefs about the

attributes of a product, the feelings it evokes, as well as processes of social comparison and desire to improve self-worth are all involved in the decision making process [6]. With dream home advertising slogans evoking promises of a “best possible future”, it is unlikely that project home builders will promote anything other, and also unlikely that consumers will demand anything that detracts from the anticipation of an idealized vision of their future lifestyle.

In summary, there are three key barriers to universal design in housing. First, universal design is interpreted as ‘disabled’ design, which is deemed ugly, and this is contrary to the aim of selling an attractive product. Second, people with disabilities and older people are considered a separate market segment needing separate products. As universal design principles can be applied to all market segments, segmentation of itself is not the barrier; rather it is the notion of social separateness. Third, the industry believes that any changes to design templates will increase costs and therefore pose a serious business risk, particularly if consumers are not perceived to be demanding such designs. The issue of increased cost is probably the barrier with the most challenges. Whilst construction cost increases are largely negligible, this is only part of the picture. The hidden issue is the cost of change itself.

The structure of the industry

There was a significant level of in-principle support for universal design features (80%), but most participants (85%) believed they could only be implemented through introducing new regulations. It seems paradoxical that something gaining such support could only be achieved by force.

Mass market housing in large development sites mainly consists of privately purchased detached dwellings. Consumers choose a block of land, and after perusing the various houses (products) on display, make their selection. Although facades and floor plans differ, structurally these homes are similar. Housing components can then be produced in a factory-like way. However, unlike a standard factory set-up, different sections of the house-building ‘factory’ are owned by different industry groups, (developers, designers, builders). These groups are brought together in a single

network supported by strong links based on professional codes and norms, and shared cost-efficiency goals. Actors interact around formal planned institutions, such as regulations, as well as informal evolved institutions characterized by ground rules [7].

Application of Systems Theory

Katz and Kahn’s classic work [8] predicts that as size and age increase, the organization or system is more likely: a) to become closed to external influences, and b) to apply internal rigid controls to maintain its equilibrium. Katz and Kahn identify ten organizational characteristics, but the two most relevant here are the role of authority and responsibility, and the way in which feedback is received.

Large organizations have a hierarchical system of authority and responsibility. Whilst the house-building industry behaves as one whole entity, it is at the same time fragmented. Although mechanistic, it lacks the hierarchical governance that single organizations possess. No point of overarching authority can be found, because power is dispersed throughout the system. Consequently there is no point at which to make an appeal for innovation. Appeals to individuals within the system are unlikely to succeed because tight controls render them powerless to effect change. Because change is not easily effected inside the machine, a force from outside is needed – in this case, in the shape of regulations. New regulations allow the whole industry machine to begin producing houses to new standards in a coordinated way and the competitive ‘level playing field’ is maintained. The system retains its cherished machine-like stability, and profit margins are presumed to be protected.

Mechanistic organizations code external feedback into language that fits existing norms. All other information is regarded as “error variance” or one-off abnormal events. The issue of communicating thoughts and the way in which language is used presents itself again. Industry codes universal design as ‘disabled design’ because the term is embedded in regulations. Consequently, a change in terminology and language use is unlikely.

If systems theory has a predictive value for the house building industry, focusing on

housing design details will require a new set of regulations even if they are contested. Such regulations will likely be based on a mix of existing codes using familiar language. However, regulation of universal design is a contradiction in terms because regulations lock designs into a set point in time and minimize further innovations. So the question is, will regulations, voluntary or mandatory, bring about the outcomes proponents seek?

ANOTHER WAY?

Universal design in housing was recently introduced as a voluntary code in the form of *Livable Housing Design Guidelines*, but it is unlikely that a new name will overcome old ideas of segregation particularly when the document references disability access standards and other instruments relating to disability. Indeed these new guidelines were launched in a retirement village and can be found in the disability section of the Australian Government website [9]. So how can the barriers of societal attitudes and industry resistance to innovation be overcome?

The Norwegian Government [10] tackled the key barrier: the systemic nature of the issue, particularly the inability to place responsibility in the hands of any particular stakeholder group. By casting universal design principles across all planning and zoning policies all officers were made responsible and accountable. The process of analyzing existing policies for compliance with universal design principles also addressed deep seated segregationist attitudes because all personnel, regardless of their personal or professional views, were required to work to the values of universal design. This approach also avoided the need to have market demand as a driver as well as the risk of consumer feedback being interpreted as "error variance". New norms and values based on inclusivity are also a way of addressing terminology issues.

The success of such a project also rests on education programs and regular evaluations of progress. This was made possible by sustained government commitment over several years. Another important aspect is allowing sufficient time for stakeholder organizations to pass through the various stages of change from

initial resistance, to challenging existing schemas to eventual acceptance of change.

CONCLUSIONS

Societal attitudes form a cornerstone upon which many other barriers sit. Nevertheless, the structure of the house-building industry poses barriers beyond those of societal attitudes. As a large fragmented system, the industry is forced to retain a vice-like grip on practices that maintain the status quo. The Norwegian experience shows that structural and systemic barriers to innovative practice within the house-building industry can be overcome in a systematic, although time consuming, way. Regardless, change requires an appeal to an external force either in the shape of building code regulations focusing on design details, or in the form of planning and zoning policies that concentrate on inclusive practices. It remains to be seen which route, if any, Australia will take.

REFERENCES

- [1] Australian Bureau of Statistics. "Disability, Ageing and Carers Australia, 4430: Summary of Findings." 2003.
- [2] Smith, S.K., Rayer, S., Smith, E.A. "Aging and Disability - Implications for the Housing Industry and Housing Policy in the United States." *Journal of the American Planning Association* 74, no. 3: 2008, pp 289-306.
- [3] Bringolf, J. "Calling a Spade a Shovel: Universal, accessible, adaptable, disabled – aren't they all the same?" Published in *Refereed papers presented at the 4th Australasian Housing Researchers' Conference, Sydney, 5-7 August 2009*. B. Randolph, Burke, T, Hulse, K. and Milligan, V. (Eds). 2010.
- [4] Landcom. "Universal Housing Design Guidelines." In *The Landcom Guidelines*. Sydney, Australia: Landcom, 2008.
- [5] Dickson, P.R. *Marketing Management*. Fort Worth: Dryden Press, 1997.
- [6] Bagozzi, R.P. *Principles of Marketing Management* New York: Macmillan, 1986, pp 37-70.
- [7] van Bueren, E.M., and Priemus, H. "Institutional Barriers to Sustainable Construction." *Environment and Planning B: Planning and Design* 29, 2002, pp 75-86.
- [8] Katz, D., Kahn, R.L. *The Social Psychology of Organizations*. New York: Wiley, 1978, pp 23-34.
- [9] National Dialogue on Universal Housing Design, 2010. http://www.fahcsia.gov.au/sa/housing/pubs/housing/Documents/universal_housing_design.pdf
- [10] Bringa, O.R. "Making Universal Design Work in Zoning and Regional Planning: A Scandinavian Approach." In *Universal Design and Visitability: From Accessibility to Zoning*, edited by J.L. Nasar, Evans-Cowley, J. Columbus, Ohio: John Glenn School of Public Affairs, 2007.