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AI 270 Interview with Hubert Froyen

The Belgian architect and Emeritus Professor, Hubert Froyen was in Dublin earlier this year when he chaired the jury for the new Universal Design category in the 2013 RIAI Irish Architecture Awards.

The Centre for Excellence in Universal Design (www.universaldesign.ie) at the National Disability Authority supported the RIAI with the new Universal Design Award and was the venue for lecture by the Belgian universal design expert. *Architecture Ireland* interviewed Hubert Froyen, who has lectured and written extensively on the subject including his acclaimed book – *Universal Design, A Methodological Approach*, published in 2012 by the *Institute for Human Centered Design* in Boston (US). Froyen was Professor at PHL / UHasselt Department of Architecture (Diepenbeek Campus) from 1996 until 2012 and is co-Founder of the first Belgian Office for Accessibility and holder of the Ron Mace Award,

Question 1.

Hubert, what inspired your interest in Universal Design?

The first answer to that question is simple and straightforward. I am myself a person with a congenital absence of a right hand. Throughout my life I've constantly been confronted with the results of design for (average) people with two hands, and with things that didn't work for me, with *dis-abling* design. Simultaneously however I also learned how to rearrange and to 'redesign' objects and small spaces to make them fit my needs. The resulting experience of the possibility of *en-abling* design later on inspired and motivated me to become an architect.

The second source of inspiration for my interest in Universal Design is of academic nature, it relates to my professional career, and is more general and objective. In society at large there is a growing consensus about the fact that the intrinsic capabilities of a person are not the only cause of barriers and disability, but extrinsic factors in an obstructive human-made environment also play a role. In the academic and professional field, the related shift in the 'social' perception of '*disability*' (person-related) to a '*disability situation*' (environment-related), is gradually moving us from 'designing for disabled persons' (Design for Special Needs) to 'integral and inclusive designing for all users' (Universal Design) as an approach.

In the end, Universal Design is about a contemporary quality relationship between a diversity of users – with evolving physical, sensorial and mental *dis-abilities* throughout all stages of life – and physical environments.

Question 2

Can you tell us a little about your latest project – the UD Woonlabo (Universal Design Living Lab), which is both a demonstration house and research laboratory ? How did the project come about ?

The first architectural concepts for the UD Woonlabo (Universal Design Living Lab) were formulated in our architectural design studio with Master students in 2007, and the UD Living Lab itself was eventually inaugurated in March 2013.

But let me first explain how general principles of Universal Design might also apply to specific private living spaces for specific people. Unlike public spaces, which should have more general

static qualities for simultaneous accommodation of the widest possible diversity of unknown users, private houses should rather be adaptable to the changing needs and wishes of the particular inhabitants. In addition, the quality of 'visitability' in private houses refers to basic accessibility for a diversity of friends, neighbors, family, but also serves easy access and circulation for the inhabitants in their daily routine. Wide enough doors, ergonomic door handles, color contrast, single-hand mixer tabs, good daylight, handrails, and level access, are initially inspired by the needs of the stigmatized group of 'handicapped', but are more convenient for all.

Now back to the UD Woonlabo (www.woonlabo.be/en). It definitely functions as a demonstration house, and as such the two dwelling units (under one roof) already attracted some 700 visitors over the first two months. Here all technology and devices are integrated in a well-designed overall architectural setting. When not in use, the automatically opening doors, features of home automation, platform lifts, sliding doors that subdivide spaces, adjustable heights for countertops and cupboards, infra-red detection, etc., mostly go unnoticed. None of these is stigmatizing.

Secondly, the UD Woonlabo is also built as a thematic training center for courses and for simulation sessions for students and for professionals, including architects, engineers, product designers and occupational therapists.

Last but not least, in the fully equipped Living Lab as well as in an adjacent multi-functional Lab (5.5 by 12 meters), selected objects and devices can be tested by a diversity of User / Experts and researchers. Every five years the demonstration house will be refurbished and best results from tests will be installed.

Question 3:

What are, in your opinion, the main challenges designers face when creating a universally designed building? How difficult was it to make a historic building an exemplar of Universal Design?

During the last two or three decades of the 20th century, architecture retreated from a former interest in the social sciences and in the needs of the diversity of users of the built environment, into its traditional domain as a profession concerned primarily with aesthetics (Milner and Edge, 1998) and with technology (Whitney, 2003).

We believe that now, at the beginning of the 21st century, no longer the technical question (how), but the anthropological question (what) should be central : 'what built environments do we want, accessible, usable and enjoyable by all, in all circumstances and in all stages of life..?'

Decision makers and designers now face the major challenge to understand and respond in a sustainable way, to the needs of diverse users, without stigma or limitations.

The question how to take up these challenges in the renovation of historic buildings is a different one altogether, and still, history teaches us. Throughout history, people have constantly modified and adapted their existing physical environments, to make these more inhabitable and liveable. However, with the growing perception of human diversity, and with increasing complexity of new technologies, discrimination and exclusion of a diversity of users also becomes more eventual.

The traditional urban row house we have rebuild to become the UD Living Lab, demonstrates how, as well in the overall concept as in the details, we constantly balance between historic value and contemporary requirements for usability and comfort. It is a real challenge, yes.

Traditional steps at the entrance door, for example, have been removed and replaced by a discrete platform lift, covered with traditional floor tiles again. The new door itself echoes the traditional construction & form, but simultaneously relies on modern technology to open and close automatically.

Question 4:

What are, in your opinion, the main challenges designers face when using a universal design approach in the design of the built environment?

The concept of Universal Design (UD) has gradually acquired global significance in the social field, in the academic, and in the professional field. But there is not yet a methodological framework to structure underlying scientific investigation, and to support related teaching and design practice.

Design for a diversity of users, for different stages of life, and for dynamic conditions in the real world, does not imply a fixed concept or a certain style, but dwells upon a basic professional attitude and upon particular skills. This design approach rather relates to science-based art, and Universal Design is 'de facto' evidence-based. The intrinsic capabilities of a person are not the only cause of barriers and disability, but extrinsic factors in an obstructive human-made environment also play a role. We can design dis-abling spaces, but equally well we can build en-abling physical structures. This notion should be at the basis of all human-centered design processes. The main challenge is to have enough relevant knowledge about the whole range of particular human functional, sensorial and mental (dis)-abilities. Additionally the designers have to understand what impact a specific design solution might have on a specific category of users.

Even if designers strive for newness and for innovation in each and every project, they still heavily rely on underlying common design patterns. Design patterns of human-environment interaction. We all know pretty well how average people orientate and navigate in public spaces, for example ? But do we have enough relevant knowledge about orientation and navigation of people with very poor or with no visual perception at all ? How do people with colostomy use toilet spaces ? How can we design a comfortable class room for children with Autism Spectrum Disorder ?

In our personal research (Froyen, 2012) we've intensively focused on the elaboration of specific Universal Design Patterns (UD Patterns), together with six complementary components of a methodological approach. We view such UD Patterns for the built environment not only as carriers of information, but also as Open Content (OC) forums and as tools in the on-going search for temporal social, academic and professional consensus.

Question 5:

People are familiar with design strategies which enable a person with a physical disability, can you tell us some specifics as to how to make environments easier for diverse users to use? (for example people of different age, size, ability or disability).

We gradually notice a shift from the partially superseded micro approach to accessibility or barrier free design to the new macro approach in design for all or Universal Design. The first approach, the elimination of barriers, is based on a predominantly 'therapeutic philosophy'. The objective here is to intervene in the environment in such a way that people can use it more independently. Universal Design on the other hand focuses attention on more than the removal of obstacles, and strives for the elimination of discrimination, for the full participation of all citizens in social life, and for an improved quality relationship between all people and physical objects and environments.

Universal Design can be viewed as a broader and more ambitious positive response from design theory and practice to the need for a human-made environment that is more accessible, useable and sustainable for a greater diversity of users in all stages of life.

Question 6

Universal design is particularly important in the public realm - can you give us some good examples?

The contemporary concept of a public realm that is 'accessible and usable for all' is a utopian idea, and as such not to be found materialized in any single building or open space. What are good examples under these conditions? In our social and professional attempts to make human-made-environments 'more universal', we should definitely not overlook the whole range of existing buildings and spaces that partially have these qualities to a greater or lesser extent. It is of utmost importance to detect, to protect and to adopt these proven solutions. Contemporary examples should teach us something useful about how to include the goals and principles of Universal Design in an efficient design process, and also how to build cost-efficiently and truly human-friendly. The newly built UCD Student Centre by Fitzgerald Kavanagh & Partners, best Universal Design Winner of the Irish Architecture Awards 2013, was not only supported by The Centre for Excellence in Universal Design at the National Disability Authority, but simultaneously won the 2013 Public Choice Award. As such it marks an important step towards human-centred and sustainable architecture.

Question 7

Environmental strategies are no longer additions to new projects but integral to their design. What do you think is required to bring about a similar situation with regards to universal design?

Ecological and economic sustainability is often seen as a matter of intergenerational equity.

The demand of 'sustainability' is, in fact, a particular reflection of universality of claims, applied to the future generations, vis-à-vis us. That universalism also requires that in our anxiety to protect the future generations, we cannot overlook the pressing claims of a diversity of living people, for whom the built environment is neither disability-friendly nor accessible today.

These rational arguments however don't answer the question why 'design-for-all', as an important aspect of social sustainability, is not yet integral to design. Throughout the years I've made this personal observation that mainly two categories of professional designers pay attention to functional disabilities, the ones that are forced by decision makers or by law, and those that have some personal experience with handicap situations, through contact with family, friends, colleagues. The latter have been introduced to some form of diversity and eventually to the 'culture of disability'.

History shows that laws and regulations are crucial in the enforcement of equal rights for all, but beyond these basic policies we need to develop a broader universal design culture, and at the same time a more specific methodological approach.

Universal Design, or Design for All, as a utopian construct, deeply rooted in human rights, echoes the motto of the French Revolution (Liberty, Equality, Fraternity) and by virtue of its 'unattainability' entails a constant need for regeneration in mentality and in culture, in dynamics and in processes, in ethics and in values.

Note:

The Centre for Excellence in Universal Design (CEUD) was established by the National Disability Authority (NDA) in January 2007 under the Disability Act 2005. Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size, ability or disability. This includes public places in the built environment such as buildings, streets or spaces that the public have access to; products and services provided in those places; and systems that are available including information and communications technology (ICT). The Centre for Excellence in Universal Design is

dedicated to enabling the design of environments that can be accessed, understood and used regardless of age, size ability or disability.