

# Design for All



## The Multisensory Museum

***Content of September 2014 Vol-9, No-9***

***1. Chairman’s Desk:.....3***

***2. Guest Editor:.....25***

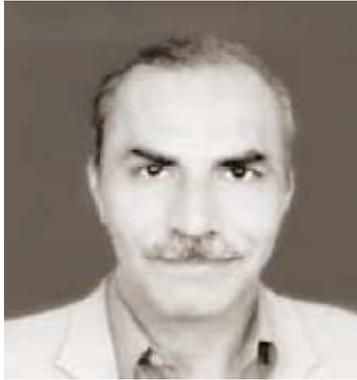
***3. Inclusive Exhibition Environments for  
Those Living With Alzheimer’s Disease:.....31***

***4. Universal Design: A Sense-able Approach:.....46***

***5. Designed for Autism: Home Museums can  
Incorporate Universal Design into their Design  
Process and Exhibitions:.....67***

***Other Regular features***

***Chairman's Desk:***



***Dr. Sunil Bhatia***

One day I visited my urban friend's house and he requested me to have breakfast with him. I noticed an unusual clutter in his kitchen and his wife was busy cooking breakfast. Both cooked and raw items were lying around her cooking platform. I could not control myself and asked my friend what she was cooking. He answered casually stating that this was her routine way of preparing breakfast, further elaborating, "she might be using something left after our dinner and she was experimenting a bit and preparing new dish." He quickly added in the same breath "you know she is so miserly that if milk is about to spoil she will add few drops of lemon juice to make the cheese and that residual water she will use in making dough of flour.' He kept criticizing his wife but I was admiring her ability of not wasting anything and making every part of edible items useful. This art of sustainability that every woman has mastery in is her inbuilt character where man lacks and tries to imitate her style of sustainability but fails miserably. Is a woman's economic dependence a reason of perfection in the art of sustainability or is she sensitive, knowledgeable about how specific are the needs of other living beings?

**There is long history of male domination that has influenced her psyche. It has tried every possibility to alter but her inbuilt character for sustainability is intact. As I thought in perspective of culture and civilization I realized that the contribution of rural woman is so valuable that no one can never scale the heights that she has achieved through her innocence, caring nature, understanding the language of silence and by judging the intention of others. Although she is not educated yet knows the art of sustainability. The word "sustainability" is popular among modern designers as a success mantra and they use as an anthem in every platform. However, our ancestors followed this as a way of life, religiously with strict discipline without bothering how much they would suffer to protect the interest of future generations. What was way of life for them has become somewhat of a unique, novel concept features for us. A woman has inherited this character from primitive age. She organizes better and never ignores anyone who is in need of her attention. In India, a rural woman does not believe in the concept of dustbins. She peels the vegetables the waste is offered to domestic animals as a part of food. Any leftover food is either transformed into fresh food by cooking into different forms or is offered to animals. In her point of view nothing is waste. She washes the rice or pulses and drained water will be let off in small pond where fishes are breeding. Cow is for milk and her urine is used as medicine for some diseases and her dung is used as fire and extra for preparing compost. Crushed bones are used by refining and cleaning the brown sugar to white granules and skins are designed as leather bags for carrying water or other leather items. Does a woman know how to utilize anything around her for developing something functional and valuable? Is this inbuilt trait in her the reason of society's progress?**

**She prefers the dress that should have minimum cuts and stitches. It is the textile industry's estimate that 15% of the overall cloth produced by mills are wasted in cuts only. Draping and knitting are the only techniques that provides near to zero waste and our ancient wisdom guides woman folk to design the clothes in this pattern. The Romans preferred draping their clothes. Likewise, in India, sari for woman and Dhoti for man is a draping dress type. Knitting is useful while making the warm clothes for winter. It was the common sense approaches of our ancient people that is still in modern practice as legacies.**

**Reason unstitched clothes can be utilized for other purposes also where stitched clothes are considered a waste:**

**The best example of 'Design For All' is her sari where user should know the process of wearing. A sari is unstitched long piece of cloth. Whether a woman is able, challenged, short or tall, bulky or thin; she can wear and adjust according to her needs. Once the sari is damaged or she is bored of it she uses for other household purposes. Modern designers have given attention to this aspect. Our ancient people have designed glass, iron brass etc. that can be recycled as long it has its basic properties in different forms. Where modern designers have discovered petroleum and its different functional values by using extensive scientific knowledge, they could not design how to manage the waste. It is cumbersome and harmful for our future generations. Once that purpose is over, she exchanges old clothes for utensils or these are used as dusters or say are recycled to turn into thread for preparing new clothes. Is it not ancient wisdom where design is in such a way that nothing is left as waste**

and it was the right knowledge that make every stage of clothes for functional value . Why do modern designers lack this art? Why do not we consider stages of wastage for utilization for others before designing the products/services? Are electronic industries not facing the problem of disposing the unused items? It is our civilization's mistakes where we have failed to recycle electronic as well as the nuclear waste for the progress of humanity rather is left as something harmful for the future generations . Urban planners have designed the city to improve the lifestyle of people as compared to rural life but we failed to see that population density has more serious problems that we did not witness in the rural world. Disposing of human waste is the biggest challenge and our lifestyle is affected and is facing new diseases what we had never suffered in rural environments. Wastage is generated when we lack knowledge of utilizing our resources properly. Urban planners design with simple mindset for disposing of the waste by either dumping away from the city or throw it in the river or say in flowing waters. This wary design invites other consequences that have polluted our physical environments and natural environments . As on today we find ourselves in a web of intricate problems. In this method of designing of any product when we are aware or unaware about the consequences but in both cases we feel helpless and unable to act. Modern person man is missing some elements and progressing on inadequate information. He believes nuclear energy is the solution of his problem of shortage of energy. My question why do we need such high volume of energy in first place? Why our modern education is taking away the real human sensitivity that our ancestors had thought for progress with values? Our educational system is failing in providing right value system to young one.

**We have designed the sanitary napkins but these are blocking our sewage system because modern woman feels shy in exposing it in public. Hygienically, sanitary napkins reduce some kinds of diseases in woman but prove to be breeding ground for many other diseases. Is it correct way to design the products/ services that take away one problem and brings in more problems. Is it not we are governed by market driven forces of society where selfish means is central idea? Our products should sell and meet the need why should we think of consequences? I was shocked to know that various governments permit certain levels of the droppings of rats or other animal excreta in flour. In home we use winnowing fan or mesh to remove all our waste. This is a minor problem and designers can come up with a better solution that fulfills social responsibility but these are governed by a commercial thought process.**

**The concept of waste is useful in design. If it sounds as unnecessary disturbance that distort the original sound it is removed by designing of filters. Idea of filters has come from the knowledge that every sound can be segregated by Fourier series. Designs of winnowing fan, mesh, and knife are result of how to segregate the waste. Even cutlery is designed to control the waste. Grinding wheel for making flour is wonderful design by using the waste management. Diameter and thickness of stone slab of grinding wheel is such that manually it can be easily rotated and grains should have enough time to stay for the required level of grinding. One stone wheel is fixed that has axle at centre and another wheel that is to rotate has hole in centre that is placed in axle, for manual rotation a handle is placed near the circumference. I was amazed to see this simple design. One woman places the small quantum of**

**grain in the hole near the fixed axle and the other woman keeps on rotating.**

**Idea of reverse osmosis for purifying the water where we segregate the wastage by designing a fine filter by using the principal of high density water because of presence of impurity attracts low density where impurity is missing. This idea was conceived by observing the green fresh grapes squeezes while placed in water and dry grapes expands by absorbing. Pickles are designed to control the wastage and available as food when a particular season is over. Ancient people had realized that moisture and air was greatest enemy for preserving foods. They allowed the food to be dry over night after applying salt and turmeric. That allows draining out extra water out of food but some moisture was retained for maintaining the freshness. After adding some combination of various spices they added mustard oil or some other edible oil available locally that did not allow foreign elements to grow and food items were placed under sunlight for few days so that these could be preserved for longer period. Design of cold storage is extension of art of pickle where we have maintained a particular temperature in controlled environments to preserve the items for longer time and there by reap more benefits when season was over. Ancient man used to communicate loudly to take the attention of others who was at close distance. After sometime it proved to be a wasteful exercise because to call men from over long distances his lung power never allowed making his call reach to their ears. Invention of telephone was to control this wasteful exercise of calling. Later on concept of wireless was an extension to control more wastage of landline. This concept of wireless has invited other problems for flying birds who navigate with the help of earth's magnetic field. They experienced confusion**

with wireless electromagnetic waves and are leaving cities and moving to new habitats.

One day a student asked me what wastage was. I was not prepared and I casually answered 'There is no wastage in this world it is our ignorance or lack of proper knowledge to use it. Petroleum was lying and our ancestors were aware about it but did not have knowledge to use it. They might have realized it was different from water and had some medicinal value when applying on wounds or cuts or that it removed dryness of skin. Another possibility is that they might have realized it had many applications and can benefits in progress of society but faced the problem of social issue of disposing or recycling of waste unlike glass that can be used as long it is glass in different applications. This might have stopped them to explore further otherwise this small benefits would boom rang for future generations. They might have thought we should explore more possibilities unless and until we have complete knowledge about petroleum and it should stay as it is. It was the industrial revolution that made us to devise various functions. Industries were in hurry to earn quick profits without understanding their social responsibility. I kept on talking but my inner voice was not convinced. I requested the class that I would discuss this matter on some other day and my ethics were checking me not to give unprepared answer. While coming out of the class I questioned myself what was preventing me not to share improper knowledge either it was my consciousness that was pricking or it was my love that had stopped. I asked myself 'What is love?' I do not know what love is but it needs two things one is service and other is sacrifice. In market driven society, employees express their love by controlling wastage and anger or annoyance by wasting either by slow work, pen down strike and

ultimate is sabotage. Sabotage makes functional to nonfunctional and it turns to wastage as long it is not functional. Level of wastage is indicator of love for organization. Less the wastage more it indicates caring for organization. There is another possibility that our ancestors were not that simple what we are imagining and did no experiment unless until they had proper mechanisms of waste management. They were governed by social responsibility and were wiser than present designers. Modern world is governed by market driven society and accumulating wealth by all means and harming environment in great way to others for earning their little profits which allows them to go ahead. Our ancestors were never allowing that commercial gains should influence their social thought processes. It was the love and care for future generations that never allowed them to produce that slightest part for the fear that it might harm the future generations. It was the era of sacrifice supported with care, sensitivity and love for fellow human beings. They had understood that nature uses only the energy it needs, nature fits form to function, nature recycles everything and nature rewards cooperation. They used sunlight for energy use. They dried the items under the sun, demand of well lit sunlight house made them to design windows and it is the best way of using sunlight for not allowing the breeding ground for diseases. Modern man uses chemical as pesticide for killing breeding ground for diseases and its waste that invites other complexities. It is my appeal that designs the product in such way it should enhance the nature not to challenge it. Nuclear plants appear challenging for nature and modern person feels sense of pride. Our primitive people's wisdom never encouraged for increasing the limited human labor that puts natural ceiling and it left the abundant resource untapped, unused

natural resources that was not under any propriety and it never encouraged waste. They had realized the mistake of designing the axe that had benefited less but corrupted the mind of people and put the civilization in its self destruction path. One improved form is sword and many other weapons of mass destruction have generated ideas out of it. It is the industrial revolution that designed the society on propriety and allows exploiting as they wish and we have left with piles of wastage. Vested interest for commercial exploitation adds more misery. We have designed the storage rooms for better management of food but market driven society creates such system that wheat or rice should be damaged and they can buy at throw away prices since it is unfit for human consumption but it proves basic ingredients for liquor industry. Liquor industries survive on optimizing profits by purchasing food grains at the cost of waste. Similarly waste is allowed for creating artificial shortage and to meet the demand they can sell the products at higher profits. Modern person receives wrong information and creates wastage. On the other hand, primitive people used their wisdom and even they designed the products with dry leaves as serving plate for food and animal skin for designing shoes, musical instruments and others items for making their lives happy and comfortable. To make the musical instruments they even used waste dried big vegetables skin of pumpkin or hollow branch of tree for flute or clay for drum. Our modern world is governed by value adding system and rewards are set accordingly. We believe in market driven ethics for creating artificial recognition of the products but in ancient time it was the survival of labor that depended on recognition of products by others. This is the reason traditional art is still suffering with onslaught of modern world but it still manages to survive. Labor exists only when

others value the product produced. Typewriter existence until a few years meant that the typist, stenographer, and experts in shorthand writing were in demand. They are still in the market but typewriter is no more recognized by others and is replaced with better technologies. Traditional economy defines laborer as adding value to the product by his labor. I say it was recognition of others that decides the price of the product and labor was offered accordingly as share by his contribution in producing. Quick and fast changes in technologies make the status of laborer highly volatile because to train the laborer we need time. Modern organizations in the name of competition drives with quick change in products to stay ahead with others and can earn fast profits. This is systematic plan to make labor class irrelevant and users are left with no other option either to replace the defective parts or throw this as waste. This strategy has made the extended life of the product for it was designed dependent on manufacturer's wish. They announce the warranty of one part of the product for longer years but they deliberately designed the others all parts in such a way that product dies before the warranty and treated as waste by users. Modern organization are devising technique to minimize the waste and concept of wastage has given us new dimension in our thought process by introducing the theory of reengineering, reprocessing and retrenchment but we are still struggling to overcome waste completely. Wastage can take away the employment and if it is in controlled manner it can be reason of prosperity for any state. Jaggery is brown sugar made of heating cane sugar juice and a person keep segregating the waste from the surface when it is boiling. This waste is turned to molasses and it is use for preparing liquor. Wastage generates numerous recycled industries and rag

**pickers scrap dealers as labor and it proves to be backbone in supporting the low cost plastic, paper, glass and forging industry. I am of strong opinion that women are responsible for creating the barter system for smooth running of the system. What is excess or beyond their use might turn waste and lead them to exchange with other items that are required. This idea met two objectives one was controlling the wastage and distribution channel was established to meet the requirement of others who are valuing. Another was everyone was allowed to do in what he was enjoying and through learning he was achieving perfection and rest of things what was his requirement for living was met by barter. It was the era of respecting others labor. Society was on mutual consent and it was a society that never encouraged waste.**

**As a designer I can say that lack of knowledge makes it most of the waste but human capacities are also responsible in creating waste. Anything that is visually not appealing user might treat as waste, a sound that is not soothing to ear is considered as waste and automobile industries tries hard to design the vehicle that should have minimum noise, even washing machine or house hold appliances are designed for minimum noise. Smell is also responsible for creating waste. A foul smell declares as waste where sweet fragrance as an asset. Touch is another human sense that decides what waste is. Eye notices change in color and it may reject it as waste. Designer should be aware while designing the product to please human sensibilities that should not declare that as waste. The biggest enemy for any product is human mind for declaring waste and its reaction is unpredictable. A custodian keeps the items in best possible manner because he knows their worth. On the other hand, another person takes the charge and declares it as waste. Library,**

museums are facing this dilemma what to be preserved and what to be declared waste. One of my friends asked me to go along with him for automobile showroom and I was surprised that he bought a brand new car that is hardly a year old. When I inquired he said 'I am bored with that one. I am happy with this car but I need something...' I thought some time people never care for functionality and life of the product. They discard for no reason and that becomes waste. Is it natural human character to discard? Is spitting natural to discard the waste or reason it might block and prove fatal when nose would be blocked with mucus. Is it cultivated to cough and spit it with force away from body? I admire our ancestors' wisdom who knew the art of sustainability by designing serving plate and bowl from dry leaves? We modern people have forgotten our heritage and a few select groups are calling themselves supercyclers who are building a sustainable future, and transforming perceptions of waste materials through the design of products.

Dr Nina Levent is expert in sustainable museum access design and it is great honor for us that she is Guest Editor for this special issue and focusing on insight of finer aspects of museum .She has co-edited 'Multisensory Museum & Art Beyond Sight Resource' and her knowledge is reflected in every word in her Guest Editorial. She is founder of inclusive culture and chaired many national and international seminars, conferences. Our readers will enjoy reading this collection of articles invited by her and will enrich their mind.

*Theory of narrative to think about the time of things – things we discard, things we used to use, things we collect, things that fall into ruin, and things that hold the future within them. It animates the*

***theory of things and makes something beautiful out of waste.” –***

***Mark Currie***

***With regards***

***Dr. Sunil Bhatia***

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**Forthcoming issues**  
**“Women Designer year of 2014”**  
**October 2014 Vol-9 No-10**

**Isabella Tiziana Steffan** is an architect, and a certified European Ergonomist member of the executive board of the Italian Society of Ergonomics (SIE), expert in Ergonomics and Design for All.



She works in the field of accessible design and Ergonomics for public and private customers, focusing on mobility and safety of weak users and on urban furniture. She performs teaching activities for several Institutes, among which Politecnico di Milano, Università Cattolica del Sacro Cuore di Milano and Università degli Studi di Milano-Bicocca, where she leads the workshop “Accessible Tourism”.

In 2012 she published two volumes: “Design for All – Il Progetto per tutti. Metodi, strumenti, applicazioni. Parte prima e Parte seconda”. Collana di ergonomia, ed. Maggioli. Assignment editor, area Professione Ergonomia of “Rivista Italiana di Ergonomia” since she has been scientific representative and responsible for the Working Group – thematic area Design for All for SIE, the Italian association of Ergonomics and member of NAB (National Assessment Board for European Ergonomist) and CREE (Centre for Registration of European Ergonomists) for SIE.

She is co-founder of ENAT (European Network for Accessible Tourism).

## **November 2014 Vol-9 No-11**

**ANNAGRAZIA LAURA** joined CO.IN. (Cooperative Integrate Onlus and then Consorzio Sociale COIN), an organisation involved in creating job opportunities for people with disabilities, also through accessible tourism, with the responsibility of developing the Tourism Dept. at national and international level. She is presently responsible for Int.'l relations and European projects and represents CO.IN in several EU funded projects will be the Guest Editor.



## **December 2014 Vol-9 No-12**

**Lee Christopher** is the Director of eLearning at Arapahoe Community College and also an ACC instructor. Lee has a BA in Philosophy, an M.Ed, and a M.F.A in Writing and Poetics. Lee is currently in the dissertation phase pursuing a Doctorate in Education from Capella University. Her dissertation title is **Universal Design for Learning: Implementation and Challenges of Community Colleges**. Lee's publications include: "Digital Storytelling" in *Handbook of Research on Transformative Online Education and Liberation: Models for Social Equality*, Kurubacak and Yuzer, Eds., IGI Global, 2011, "Hype versus Reality on Campus: Why eLearning Isn't Likely to Replace a Professor Any Time Soon" with Brent Wilson, *The E-Learning Handbook*, Carliner and Shank, eds. Pfeiffer, 2008 , and "What video games have to teach us about learning and



literacy,” located at <http://edrev.asu.edu/reviews/rev591.htm>, Lee is on the Colorado Community College System Task Force for Web-IT Accessibility. She has a passion for Universal Design for Learning and will be guest editor for concluding issue of year 2014 Women’s Designer.

## **January 2015 Vol-10 No-1**

**Stephanie Battista, Senior Design Program Manager .**

**Stephanie directs medical and wearable technology design programs at Modern Edge. She is responsible for project management, client relationships, business development, sourcing, and studio culture.**



**For over a decade prior to joining Modern Edge, Stephanie was the principal of her own product design and development firm specializing in lifestyle product design, soft goods, and wearables for technology-driven start-ups. Stephanie brings expertise in medical devices, textiles, consumer goods, and wearable technology. She will be the Guest Editor and invite different authors of her choice on concept of universal design and it will be our fifth special issue on different occasions with IDSA, USA. Website: [Modernedge.com](http://Modernedge.com) Email: [s.battista@modernedge.com](mailto:s.battista@modernedge.com)**

## **February 2015 Vol-10 No-2**

**Prof Mugendi K. M'Rithaa is an industrial designer, educator and researcher at the Cape Peninsula University of Technology. He holds postgraduate qualifications in Industrial Design, Higher Education, and Universal Design. He is passionate about various expressions of socially (responsive and) responsible design, including Participatory Design; Universal Design; and Design for Sustainability. Mugendi has a special interest in the pivotal role of design in advancing the developmental agenda on**



the African continent. He is associated with a number of international networks focusing on design within industrially developing/majority world contexts, and is currently the President-Elect of the *International Council of Societies of Industrial Design* (Icsid). He will be the Guest Editor and his passion for universal Design is real driving force for establishing the concept in Africa continent.

### **March 2015 Vol-10 No- 3**

**Paula Sotnik, Institute for Community Inclusion, School for Global Inclusion & Social Development, University of Massachusetts Boston .**



**Paula Sotnik developed and directed 12 federal and state training and technical assistance projects (past and current) supporting individuals from traditionally underrepresented groups, including persons with disabilities. She is a recognized expert consultant, trainer and author on access and accommodations; culture brokering; diversity; outreach and recruitment strategies; team and partnership development; measurable outcome oriented strategic planning; national service, volunteerism and disability legislation, policy knowledge and practice acquired through years of personal, educational and professional life experiences. She serves as a consultant reviewer and trainer for an international fellowship exchange program. She will be Guest Editor of special issue and will focus on Universal design development in USA**

## **April 2015 Vol-10 No-4**

**Debra Ruh is a Global Disability Inclusion Strategist, ICT Accessibility Training and Social Media Thought Leader on Disabilities. She focuses on Disability Inclusion, EmployAbility, Corporate Social Responsibilities, ICT Accessibility, Corporate Social Responsibility and Social Entrepreneurs. She is also the author of several books including "Uncovering Hidden Human Capital: How Leading Corporations Leverage Multiple Abilities in their Workforce" and "Finding Your Voice by Using Social Media"**



## **May 2015 Vol-10 No-7**

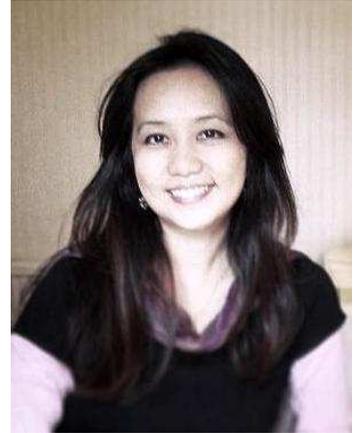
**afUD ( French Association of Universal Design) President Jean Rene Moussu has accepted our invitation for Guest Editor for our special issue. He is enthusiastic to popularize the concept of Universal Design in his country because he feels it is social responsibility of every citizen of the world to make the world accessible to all. He is inspired by Ron Mace and believes his word his philosophy**



**\*The UD is a collective thought. Think different !UD\*think! The UD\* is notan evolution, it is a revolution.**

## **June 2015 Vol-10 No-7**

**Dr. Antika Sawadsri** is a full-time lecturer in the School of Interior-Architecture at King Mongkut's Institute of Technology Ladkrabang (KMITL). She received a PhD from the School of Architecture, Planning and Landscape, Newcastle University, UK. She has qualifications on interior Architecture and Planning and is a specialist in an



interrelationship between social construction of 'disability' and the designed environment.

Her academic interest focuses on inclusiveness in the process of creating living spaces. Recently, Antika has taken parts in both the State's agencies and non-government's movement in mobilising equal access to the buildings and city of disabled and ageing groups in Thailand.

## **August 2015 Vol-10 No-8**

**Dr. Bijaya K. Shrestha** received Doctoral in Urban Engineering from the University of Tokyo, Japan (1995-'98), Master in Urban Design from the University of Hong Kong, Hong Kong (1993-'95) and Bachelor in Architecture from the University of Roorkee (now Indian Institute of Technology), India (1983-'88). Dr. Shrestha has got working experiences of more



than two decades. He had already served to the Department of Housing and Urban Development, Ministry of Housing and Physical Planning, Government of Nepal, United Nations Centre for Regional

Development (UNCRD), Japan and various architectural schools in Nepal before taking the present job at Town Development Fund (TDF). He has initiated a new master program in Urban Design and Conservation at Khwopa Engineering College, Purbanchal University, where he served two years as Head of Post-graduate Department of Urban Design and Conservation.

Dr. Shrestha is the recipient of numerous gold medals for his excellent academic performance and decorated by 'Calcutta Convention National Award 2006' by Indian Society for Technical Education for his best paper at the 35<sup>th</sup> ISTE Annual convention and National Seminar on Disaster – Prediction, Prevention and Management. He is also member of numerous professional bodies and life member of various alumni associations. He has already contributed more than five dozen of papers, published in various forms: book chapter, international journals, conference proceedings, local magazines and journals including in local newspapers. Moreover, he has been invited in numerous international conferences for presentation of his research findings. Finally, his field of expertise includes sustainable urban development, disaster management, housing, local government capacity building and development control. He will focus on universal design concept on Nepal.

## **September 2015 Vol-10 No-9**

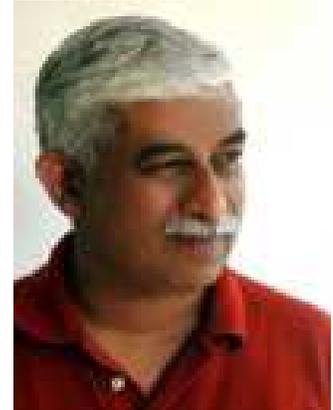
**Min Wang** Dean of School of Design CAFA, Beijing Beijing City, China Design Currently with AGI, China Central Academy of Fine Arts School of Design and previously worked with Square Two



**Design, ICOGRADA, Beijing 2008 Olympic Committee. His education is from Yale University will be Guest Editor and he will highlight the contribution of China in Universal Design.**

### **October 2015 Vol-10 No-10**

**Prof Ravi and Dr Ajanta Sen of IIT Mumbai India will be the Guest Editor and theme of the special issue is Design and Children.**



### **November 2015 Vol-10 No-11**

**Ewa Golebiowska, Poland is the president of EIDD Design For All and she has accepted our invitation of Guest Editor and she will invite the authors from European countries for special issue.**



## **GUEST EDITOR:**



***Nina Levent, Ph.D. is the Founder of Inclusive Culture Project. For 15 years she served as Executive Director at Art Beyond Sight. She is an art historian who taught graduate seminars at the New York Academy of Art. Levent is a co-editor of Art Beyond Sight Resource Guide, Handbook for Museums and Educators and a recently released volume Multisensory Museum. Cross-Disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space. Her research interests and expertise include multisensory museums, sensory design and learning, cultural inclusion, accessible museums, universal design, representation of disability and difference, representation of the body, sensory and perceptual normality. She is currently working on a publication about Food and Museums. Levent has lectured on accessibility and multi-sensory learning at museums around the world. She has trained museum staff in the US, Korea, Japan, France, Italy, Puerto Rico and Mexico.***

***She is one of the principal organizers of the international conference on Multimodal Approaches to Learning that has been taking place every two years at the Metropolitan Museum of Art since 2005. Recently she worked as a lead investigator on the Multi-Site Museum Accessibility Study, a research project that involved major museums such as SFMOMA, Guggenheim, Museum of Fine Arts, Houston; National Gallery, DC; Brooklyn Museum, Indianapolis Museum of Art, as well as 15 smaller museums. She has worked with Georgetown University, Arizona State University, University of***

**Washington, University of the Arts, and Cooperstown Graduate School on the Disability and Inclusion Curriculum for Museum Studies, a university curriculum project. She received her Ph.D. from the Humboldt Universitat in Berlin, and MA from the Moscow Lomonosov University. Nina Levent, Ph.D. Inclusive Culture: [nl@inclusiveculture.org](mailto:nl@inclusiveculture.org): 917 476 6428 Skype: nl7101@ninalevent Co-editor Multisensory Museum & Art Beyond Sight Resource**

## **Introduction:**

*Nina Levent, Ph.D.*

**This edited volume presents four case studies exploring inclusive design of spaces, experiences, and educational programming at museums. The volume's contributors reflect critically on contemporary museum practice that addresses visitors who are blind, D/deaf, hard of hearing, visitors with Alzheimers and dementia, as well as visitors with autism spectrum disorders.**

**A prevailing myth about Design for All (or Universal Design, a term used more commonly in the United States), especially Universal Design of museum programs, is that accessible programs and spaces are not cost-effective investments simply because they are not being used. We so often hear complains from the staff of cultural institutions about wheelchair accessible seats that are empty, and expensive sound amplification equipment that is gathering dust in the closet, and the staff has not changed batteries in years.**

**Some of these misperceptions come from considering programs for people with disabilities separate from the regular programming. Even when accessible programs take place in the gallery, they are often disconnected from regular programs in terms of their design, goals, and funding. However, there is a trend toward making accessibility a seamless part of museum overall work, and not an add-on, an afterthought or a niche program to attract funding or meet a legal requirement.**

**Only very few large cultural institutions can afford the luxury of a dedicated Accessibility Coordinator or Manager, who deals exclusively with visitors with disabilities and access accommodations. The majority of museums worldwide place the work of welcoming and reaching out to visitors and future visitors with disabilities on the shoulders of their other education, design and communication staff. These museum professionals would be much more effective if they address accessibility in terms of Universal Design for all visitors and build the strategies for making experiences meaningful and welcoming for visitors with disabilities into their regular routine.**

**Universal Design in a museum is often viewed as a burden from a practical point of view. This misconception is usually based on the view of inclusive design as a quick fix, a way to address a complaint or meet grant requirement, something that needs to be accomplished before a looming deadline. When a museum staff needs to check a box "is your institution/exhibit accessible to people with disabilities," she thinks in terms of finding a quick solution not in terms of building a sustainable program. If a museum needs to address a complaint or meet a legal standard, the institution is more likely to "throw money" at a quick fix for the problem cited, instead of creating an elegant well-designed solution that enhances the museum experience for all visitors. One way to create a paradigm shift in thinking about Universal Design and Accessibility for museums is to think of it as a process and a framework for decision-making rather than a quick solution. Museum's Universal Design plans change to incorporate new teaching methodologies, new technologies, and new community partnerships.**

**When museums incorporate Universal Design ideas and approaches in their planning processes, for exhibits, websites, tours, marketing, staff development, etc., then the costs for accessible design/programming is part of the museums' general operating budget. To make museums welcoming to a large group of people, many museums invite people with disabilities to serve on advisory panels that review access accommodations and suggest revisions if needed. Designs can be fine-tuned by the users, who will assist also in marketing and outreach to communities of people with a variety of disabilities, their families and caregivers.**

**If Universal Design and Accessibility at museums is an unfolding process, there is space and time for training staff, but more importantly, for accumulating experiences, learning from interaction with users, creating new communities of practice among museum professionals. If a museum considers Universal Design holistically, it might address different architectural, design and programmatic issues and investments in stages; the team might consider how one-time larger investments such as purchase of sound amplification systems or touch models can be made cost effective. Tactile models and other props can be used with a variety of audiences from visitors who are blind, to students with attention deficit disorder, autism, learning disabilities, and on regular tours, as they afford yet another way to connect with the museum objects. Sound amplification devices that are often available by request to those who are hard of hearing, can be offered on all tours, especially on tours for older visitors; they can also be very useful for any group tour if the gallery is crowded, noisy or has poor acoustics.**

**Design for all is often thought of as too expensive and beyond what the majority of museums can afford. The papers in this volume**

**explore current museum practices and considerations that can guide museum staff when accommodating visitors with various disabilities, The vast majority of these methods are not very expensive. They require planning, investigation of needs of museum visitors, partnership with visitors, staff training, but in only few cases major costs are involved in creating these universally designed or accessible programs. As the world population ages and as we recognize the diversity of human abilities among both young and older visitors, Design for All approaches might offer the most sensible and universal solutions.**



***Nina Levent, Ph.D.***



***Erin recently finished her second MFA in Museum Exhibition Planning and Design at the University of Arts in Philadelphia, Pennsylvania. Her thesis was focused on creating a “Museum Pod” within a care facility that generated a shared social experience for those living with Alzheimer’s Disease, their family, and friends. Prior to her time at the University she was searching to find her place within the entertainment industry until she found a volunteer position at the National Canal museum in Easton, Pennsylvania. This is when she decided to transition her skills from her theatrical background to her current focus within the museum community.***

## **Inclusive Exhibition Environments for Those Living With Alzheimer's Disease**

***Erin***

There are more than 44.4 million people currently living with Alzheimer's Disease in the world, and by 2050 that number is expected to rise to 135.5 million.<sup>1</sup>As the larger portion of our population in countries like India and the United States are approaching an age where these disorders are more likely to occur, our global community must find a way to support and care both for those living with Alzheimer's Disease and the people who support them<sup>2</sup>. Alzheimer's Disease (AD) is a specific form of dementia that causes problems with memory, thinking, and behavior.<sup>3</sup>The medical community has shifted its view from a purely medical regimen to one that includes a focus on well-being. This creates a need for more quality of life experiences for those living with Alzheimer's Disease. Museums have been working towards broadening their missions and reaching out to an underserved audience. In line with that principle, museums could provide a potentially profound experience through a cultural intervention that becomes a shared experience for those living with Alzheimer's Disease and their families. The focus presented here is how museums can create a meaningful designed

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<sup>1</sup> "Dementia Statistics- The Global Voice on Dementia."(website) <http://www.alz.co.uk/research/statistics> accessed September 15, 2014

<sup>2</sup> "Facts and Figures | Alzheimer's Association." (website) accessed November 26, 2013. [http://www.alz.org/alzheimers\\_disease\\_facts\\_and\\_figures.asp](http://www.alz.org/alzheimers_disease_facts_and_figures.asp)

<sup>3</sup>staff, Mayo. "Definition."(website) accessed November 3, 2013. Mayo Clinic. <http://www.mayoclinic.com/health/dementia/DS01131/DSECTION=treatments-and-drugs>

environment focused around the collections, which empowers and reconnects those living with Alzheimer's Disease to their caregivers and their family members.

### ***Accessible Design***

"Design is an active purposeful adaption method that people use to adjust their world to their needs."<sup>4</sup> With this definition of design as a more practical insight into the process, it must be broken down into how designers can achieve a functional environment. The authors of *Universal Design* define universal design theory as "the creation products, places and systems that reduce the need for special accommodations and many expensive, hard-to-find assistive devices. It also reduces the stigma by putting people with disabilities on an equal playing field with the able bodied population"<sup>5</sup> Adding an "able bodied" percentage of the audience means that everyone must be as close to the same level of access so it can become a shared experience. The qualifying definition is that the design is to have the ability to be usable or accessible to most.

The concept behind universal design is appealing but must be used in a way that makes sense depending on each scenario. When an environment attempts to be all things to all people it can create an unintentional chaos and confusion depending on the complexity of its intent.<sup>6</sup> In contrast when elements are incorporated that are specifically designed for a set of parameters others who do not fit

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<sup>4</sup> *Maisel and Steinfeld, Universal Design, Kindle Edition*

<sup>5</sup> *Maisel and Steinfeld, Universal Design, Kindle Edition*

<sup>6</sup> *Larson and McKenna-Cress, Creating Exhibitions: Collaboration in the Planning, Development and Design of Innovative Experiences, "Accessible Design", Kindle Edition*

within the parameters can adapt. For this reason the design of this specific environment should consider how to allow the person living with AD to overcome possible physical and cognitive disabilities that could be present. Thus making the environment more accessible for this demographic.

### ***Barriers***

The key part of universal design theory that pertains to this scenario is the identification and overcoming of physical and cognitive barriers that would impede someone with AD. In the book, *Universal Design*, the authors are speaking generally about people with or without disabilities, they point out barriers are obstacles that everyone must overcome as they interact with their environment. Design can be a potential tool to alleviate barriers to allow for the ability to focus or aid in achieving their goals, whatever they may be. If these barriers are not taken into consideration prior to the implementation for design, the overall design can impede people from the goal they are set out to achieve.

For this scenario, the barriers that are to be identified are ones that would disallow the persons with AD to express themselves and share an experience with their loved ones, either physically or cognitively. This portion of the theory could aid the design in generating the accessibility for the specified audience.

Basically there are three major barriers that need to be overcome to enable those living with AD in this scenario.

- *They should have the ability to view him or herself in a positive manner.*

- ***They should have ability to share or express him or herself to the social group they are interacting with.***
- ***They should be able to physically maneuver throughout the space without impediment. If these needs are met in an empathetic unassuming manner it should lead to self-empowerment.***

Defining the self is a particularly hard endeavor. Without a positive identification of the self, one encounters many barriers regardless of cognitive impairment. However, it becomes important to keep self-identity intact for those with AD. Excess disability is defined as conditions that preclude the person from maximizing upon remaining abilities.<sup>7</sup> If the loss of self can be prevented then excess disability will also be prevented. *The Person with Alzheimer's Disease* delves into defining the self as John Lock, an enlightenment philosopher, has. He defines the self as dependent upon one's memory functions. How then do we help those with AD recognize themselves? Building on memories as a sense of self, Harris continues this definition of the self in three stages. Self-I is the self of personal identity. This is the ability to define oneself in the singular pronoun. Self-II is the self that is identified as the composition of the physical and mental attributes that have been acquired through life experience. Both of these stages can be maintained well into the course of a diagnosis. Self-III is defined as how aspects of the person are perceived by society. This stage is most dependent on reinforcement in a positive manner and ties nicely with concepts presented in universal design theory. Therefore, if we treat someone with AD as a person who has no capability, that

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<sup>7</sup>Brandy Harris, *The Person with Alzheimer's Disease* (Baltimore: Hopkins Press, 2002)

is how they will view themselves. The consequence is that they will believe they are disabled causing the excess disability. The solution seems to come from honoring, Self I and Self II, which will bolster Self III.<sup>8</sup> It is the goal of the design to create an environment that could help in some way to keep the identity intact.

Richard Taylor's book, *Alzheimer's From the Inside Out*, provides insight on living with AD. The premise throughout his collection of essays is that of promoting self-empowerment. These individuals can still interact within social parameters, just in a different capacity. There is a need to acknowledge the problematic state this disorder causes in order to adjust interactions between the groups that make up the specified audience. Instead of protecting those living with this disorder, we should be empowering them to attempt to maintain a full and meaningful life.<sup>9</sup> If the caregivers give up on those living with AD, those living with AD will give up on themselves. While Richard Taylor is not in any way unappreciative of his care, he makes a compelling case for promoting an environment of open communication between the person living with dementia, the caregiver, and the medical community.<sup>10</sup> It is concluded that a carefully designed environment is crucial for those living with Alzheimer's Disease to be more empowered while giving caregivers opportunities to learn new forms of communication.

The book *I'm Still Here* establishes that everyone needs social engagement to conduct healthy and productive lives.

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<sup>8</sup> Brandy Harris, *The Person with Alzheimer's Disease* (Baltimore: Hopkins Press, 2002)

<sup>9</sup> Taylor Richard *Alzheimer's from the inside out* (Baltimore: Health Professions Press, 2007)

<sup>10</sup> Taylor Richard, *Alzheimer's From the Inside Out*

Communication, understanding and empathy are building blocks of such relationships, which are attained through social engagement. Because this is true for everyone, this means it is true for the person living with AD. It simply means that there has to be an adjustment on the part of the caregiver. Utilizing more emotive expression rather than informative communication can be very useful. It seems that it is crucial to remain present within the experience of the person with AD, because they live in the moment.<sup>11</sup>

Providing meaningful communication may be imperative: framing conversation in an open, attentive environment may enable those close to the person with AD to help them. *The Person with Alzheimer's Disease* goes on to define attentive listening as moving beyond the words that are spoken to the interpretation of the emotional message or need behind the statement. This requires an environment that will allow the caregiver and family members to listen.<sup>12</sup> The book, *Universal Design* frames the choices for the environment to be calm, intimate, and clear; these elements provide the caregiver the access overcome a potential barrier in communication by providing focus and clarity. This way their attention can be devoted to attentively listening.

While the symptoms of Alzheimer's are not often physical, designing a space that is conducive for those with physical disabilities to maneuver would be beneficial. Due to the age demographic where this disorder is likely to occur, physical disabilities should also be considered. Creating a space that considers the use of wheel chairs; assisted walking devices and seating will allow the audience an

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<sup>11</sup>Zeisel, John. *I'm still here*

<sup>12</sup> Brandy Harris, *The Person with Alzheimer's Disease*

element of comfort. Providing plenty of assisted hearing and visual devices will also demonstrate an inclusive environment as well.

### ***Empowerment***

Traditionally the museum environment has been focused on learning outcomes a visitor could reflect upon after the visit has concluded. However, exhibitions also allow visitors a chance to connect with a larger cultural exchange. Focusing on the latter goal as an ephemeral social activity may be more appropriate in situations where those with AD will visit the environment. By making the collections of a museum accessible to the audience in this way provides a catalyst for them to participate in a discourse that could shed a new light on how those living with Alzheimer's (AD) are perceived by those closest to them as well as themselves. Continuing into possible solutions to problems that occur around the potential loss of memory i.e., isolation, withdrawal, anxiety, etc., *The Person with Alzheimer's Disease* concludes that maintaining social relationships is key. A person does not exist in a vacuum. This social psychology found in the book focuses on the social interactions of the person with AD. It should not be surprising that stable, and caring relationships provide comfort, security, and inclusion. As a result of this disease a barrier in communication becomes relevant to the caregivers when trying to provide meaningful social discourse.

An environment that will allow for a social experience can be conceived through thoughtful planning. The physical structures that are designed to support the experience must adjust in a way that allows the audience to operate without much assistance. If these elements are taken into consideration the social experience should

be supported. The expectation is that this social experience will rebuild self-confidence and empower the audience.

In the book, *I'm Still Here*, John Zeisal outlines eight characteristics to creating an environment that enables those living with Alzheimer's Disease. When creating a walking path the designation as to where the path leads should be clear. Privacy is important when living within a communal atmosphere. The person must feel as if there is somewhere that is specifically his or her own. The definition of space becomes vital in this situation as well. It must be clear what the intent of each space is: these clues will help the person with AD know how to behave and operate within each room. Utilizing the five senses within a design allow everybody to understand their surroundings. This becomes more important when one of these senses is affected by this disorder. Finally, designing an environment that allows people to do for themselves instills a sense of independence. While Zeisal is concerned with the entirety of a treatment center, these tenets can be extracted to apply to an exhibition environment.<sup>13</sup>

### ***Physical attributes***

The aesthetics of an environment play a very important role in supporting the empowering experience. The space needs to be clearly defined, inviting, safe, and visually pleasing.<sup>14</sup> These characteristics have been found by Jon Zeisal to aid those living with Alzheimer's operate at their full capacity by creating cues to the

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<sup>13</sup>Zeisel, John. *I'm still here: a breakthrough approach to understanding someone living with Alzheimer's.*

<sup>14</sup>Zeisel, John. *I'm still here*

**cognitive mapping in a way that allows those in the environment to react in a more positive way.<sup>15</sup> These elements signal to the visitors that this is a social atmosphere with a different purpose. It will help the audience decide how to behave and prevent them from withdrawing from the conversation. This environment needs to channel the essence of a museum; the challenge becomes finding that essence. The typical “white box,” or the large room with stark white walls and minimal adornment, which was at one time typically found in the art museum, may scream museum but it may not be the appropriate choice in this instance. This approach could feel sterile, cold, and would not stand out enough to define the space. There is a chance that it could also feel much like a hospital, which in this case may feel very negative. However, if slight changes were made to this stereotypical appearance it could be very successful. What would work is the simple composition of the room, the open feeling could be made inviting depending on the materials and colors chosen.**

**Since the aim of the aesthetic is museum persona, it must be defined what that persona is. This of course will mean many different things to many different people. However, it usually clean, with simple lines and “luxurious” materials to accentuate or at least does not draw focus from the displayed objects.<sup>16</sup> Implementing the use of the elements previously mentioned could support this overall space definition and aid the visitors in not falling into the unwanted feelings that could arise.**

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<sup>15</sup>*Zeisel, John. I'm still here*

<sup>16</sup>*Zeisel, John. I'm still here,136*

**The space must be inviting, comfort is the most important element. To achieve this color, and material choices should be the main focus. An example of color choice is a color palette that is warm, yet not distracting; the color palette could be comprised of warm neutral colors with cool accents. This will help the space become a warm safe space while the balancing accents prevent it from becoming too exciting or overwhelming. The material choices could follow suit: when there is the opportunity to choose the preference should be to find natural resources such as fabrics, woods, corks, bamboos, etc. These choices have the potential to make the space more livable and lively, which makes it more inviting.**

**Providing comfort to the audience is not just a visual task, there is much physicality to consider when achieving the feeling of comfort. The ergonomics of the space must allow the participants to maneuver and remain comfortable during the duration of the their time within the environment. The proportions present physically in the design of the space will not only give the appearance of comfort but also do so while the participants interact within the space. Furniture should be light but sturdy and adjustable to when possible. This allows these pieces to easily move into any position desired for specific visitors but still be supportive and conducive for a variety of activity. For example if the institution was intending to lead a program designed for this audience they could purpose available elements in a configuration suitable to accomplish the environmental requirements, while remaining aesthetically consistent. This continuity maintains the definition of the space that will help the visitors remain focused on the social task. Grab rails will specially placed around the perimeter do help maneuverability, but they also leave negative feelings associated with them. The**

**solution would be to design these tools in a way that they naturally seem something that is stable enough to offer the same support but not obvious that its intended purpose. For example a sturdy chair rail also surrounds the perimeter of the room but is seen as a decorative feature. If the chair rail's dimension were large enough for one to grab on to it would provide the support of a grab rail. There should be plenty of space around any available tables leaving at least four feet aisles around them. These proportions will allow the space to be open and accessible to everyone and this will provide comfort to the audience.**

**When considering the feeling of safety, many of the elements covered so far will aid in this sense. The additional consideration of clean sightlines will complete the composition.<sup>17</sup> These sightlines will allow the audience not only a great view of the objects presented, but will allow them to find their way around the space. The key lines of sight that should be emphasized during the program would be the facilitator and the work and the exit doorway. This way if a visitor needs to leave to go to the restroom they can do so at their own convenience. While these sightlines would let the audience orientate themselves to the space, which provides safety, it would also empower them. If the environment allows for the audience to maneuver comfortably on their own they will do so.**

**The scale of the room should also be considered, this encompasses both the actual size and how much content it holds. Large vast spaces may feel overwhelming to those living with AD; it does not**

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<sup>17</sup>*Zeisel, John. I'm still here, 140*

provide enough for the visitor to focus on. The same is true for the amount of content. Finding this balance could start with the decision on deciding how many objects are to be displayed. Limiting the objects presented around to a central theme may be helpful into maintaining a smaller scale. Once the objects to be displayed are selected finding the right proportion for them then becomes key. If the composition is too large the objects will be lost and it will hard to maintain focus. If the composition is too small the objects the objects themselves could impose on the space and cause a cramped feeling which could be perceived as hard to navigate. Most of this balance will be considered in the planning of the exhibition, if it feels challenging to accomplish prototyping different environments with the intended audience will provide vast insight.

In September of 2012, The Phillip and Muriel Berman Museum of Art located within the Ursinus College created an exhibition, "Accessibility: Deconstructing and Reconstructing Art For Access," that concentrated on constructing art for access to all. This started off as an initiative within the institution to make the museum's collection more accessible to a wide range of disabled individuals. The exhibition displays 2-D and constructed 3-D representations of pieces from the museum's permanent collection. In the physical space pieces are hung lower so that one could be seated and have an optimal view of the piece. There was also a plastic glove dispenser, and signs that encouraged visitors to touch the pieces. iPods were positioned to provide soundtracks and verbal descriptions that corresponded to specific pieces.<sup>18</sup> It offers a wide range of ways to

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<sup>18</sup>"Exhibit at Ursinus drew on views of those with dementia." *Philly.com*. (Website) accessed February 5, 2014. [http://articles.philly.com/2012-11-10/news/35017526\\_1\\_ursinus-college-s-berman-museum-art-show-art-appreciation](http://articles.philly.com/2012-11-10/news/35017526_1_ursinus-college-s-berman-museum-art-show-art-appreciation)

**experience the pieces. In addition to the physicality of the space the exhibition offers specialized tours that include multi-sensory programs, 3D tactile diagrams or 2D works, and guided tours for those living with dementia.**

**This exhibition's use of multi-modal forms of communication and corresponding programming can be set as an example. In this case the community that is recognizing the person as an individual is the museum rather than the caregivers. This exhibition also shows that an exhibit developed for this audience can take place within a primary location. While it may not be a permanent space for the audience it makes the institution aware that this form of exchange is desired and necessary.**

**These elemental decisions will compose an environment that differentiates the space in the way that is desired. It should empower the audience and encourage them to participate in the social activity of a visit. The guides that are laid out here are specific to this audience, but there is still plenty of room to operate to create an inspired designed composition. The most important function of the environment is to support and enable the experience and that is what should be kept in sight<sup>19</sup>.**

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<sup>19</sup>Zeisel, John. *I'm still here*,138

***Inclusive Culture***



***Erin***



***Layla-Aurora Ballner is currently collaborating with the University of Pennsylvania Museum of Archaeology and Anthropology to make ancient artifacts accessible to visually impaired visitors. Her passionate work has consistently addressed the benefits of integrating sensory and participatory experiences into exhibition spaces in an effort to create more inclusive and comprehensive exhibitions. In the past, she has worked with a variety of cultural institutions from the Massachusetts Museum of Contemporary Art to the National Museum of American Jewish History. From a young age, Layla experienced first-hand the symbiotic relationship between visual culture and participatory learning, experimenting with various tactile media as a means of communicating ideas. In 2013, she earned her Masters degree in Museum Exhibition Planning and Design from the University of the Arts. Her final thesis established a set of recommendations for traditional art museums to apply tactile elements to their exhibition spaces without ompromising conservation***

## **Universal Design: A Sense-able Approach**

***Layla-Aurora Ballner, MFA***

**Exhibition designers create spaces that convey visually and emotionally the big idea they want to get across. They do this to connect people with objects and the stories they tell, creating meaning and fostering relationships. The resulting exhibition should attract what is usually referred to as "the general public." The problem is that the general public includes people with disabilities and yet the needs of these people are not always considered in the design phase. Museums are currently doing a lot to reach out to people with disabilities. They offer physical accommodations such as ramps and signage, as well as programs addressing visitors' cognitive needs. However, a more substantial and meaningful experience can be achieved. Perhaps a more efficient solution lies in designing exhibitions to what a visitor is able to do in order to connect with the content.**

**The United Nations Convention on the Rights of Persons with Disabilities defines Universal Design as "the design of products, environments, programs and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. 'Universal design' shall not exclude assistive devices for particular groups of persons with disabilities where this is needed."<sup>20</sup>**

**Universal design addresses everyone on their own level of accessibility and understanding. Exhibition designers provide all**

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<sup>20</sup> ***United Nations. "Convention on the Rights of Persons with Disabilities." United Nations Enable. <http://www.un.org/disabilities/convention/conventionfull.shtml> (accessed August 10, 2014).***

visitors with the same caliber of experience. All visitors have access to the same level of communication. They become part of the same conversation. More personal connections can be made with the exhibits using universal design, achieving museums' intent of fostering education and appreciation of their collections.

To achieve this optimum level of accessibility, it may be beneficial to consider the functioning senses of the visitor. Each of our senses is a receptor of information and any type of media uses at least one of those senses to convey information to the visitor. Our senses are a means of organizing and understanding our environment. By considering the different senses and media your visitors are able use, you are adding opportunities for all visitors to understand and organize the information presented in the exhibitions.

The following definitions of these challenges were established by the United Nations, which "*promotes and supports international cooperation to achieve development for all, and assists governments in agenda-setting and decision-making on development issues at the global level*"<sup>21</sup>:

**Impairment:** Any loss or abnormality of psychological or anatomical structure or function.

**Disability:** Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.

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<sup>21</sup> *United Nations. "United Nations - Mission statement." UN News Center. <http://www.un.org/esa/desa/mission.html> (accessed August 10, 2014).*

**Handicap:** A disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfillment of a role that is normal, depending on age, gender, social and cultural factors, for that individual.

*As Disabled Peoples' International states, "Handicap is therefore a function of the relationship between disabled persons and their environment. It occurs when they encounter cultural, physical or social barriers which prevent their access to the various systems of society that are available to other citizens. Thus, handicap is the loss or limitation of opportunities to take part in the life of the community on an equal level with others."*<sup>22</sup>

The responsibility of accessibility is not only physical, but also psychological. Can your visitors access not only the space, but the information conveyed within that space? Accessibility should not be reserved for one group or another. Accommodating all museum visitors is possible without jeopardizing precious resources. Furthermore, by not accommodating people with disabilities, the potential of these visitors to be inspired, educated and impacted by their experience in the exhibition is incomplete.

Universal design is, by definition, inclusive. Therefore, designers applying universal design directly address and benefit both the general public and frequently underserved audiences, such as those with disabilities. It also benefits the museums that apply its principles to their spaces. Although the exhibition space is the primary focus of both the visitor and the museum, it is important to

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<sup>22</sup> *"Centre for Legislative Research and Advocacy." Disabled People's International Asia-Pacific Region. [http://www.dpiap.org/resources/pdf/dpbriefnoclra\\_11\\_05\\_16.pdf](http://www.dpiap.org/resources/pdf/dpbriefnoclra_11_05_16.pdf) (accessed August 10, 2014).*

remember that universal design should also be considered when designing secondary areas, such as dining areas and restrooms. These spaces address important needs of the visitor and can make or break their experience, regardless of how positive their experience is in the galleries.

It is important to understand that accessibility is a constant challenge faced by people with an impairment. A visitor may be dealing with any number of disabilities when they enter a museum. Also, even if two people share the same disability, it may impact them completely differently. Therefore, what works for one visitor may not work for another. It is crucial to understand their needs when designing an exhibition space where they are expected to connect with a given set of concepts or objects. These impairments typically fall into at least one of four categories: mobility, sight, hearing, and developmental. The challenges faced by visitors within these groups can be alleviated through sensory-based experiences, creating a more universally accessible exhibition.

### **Mobility Impairments**

People with mobility impairments tend to experience difficulty moving through spaces. In spaces that are familiar, their muscles adapt to moving in particular ways at specific points in space or time. Spaces that are unfamiliar, such as museum exhibitions, can be more difficult to navigate. Certain materials may be difficult to traverse. Moving elements in the design may also be a challenge. The speed and size of the moving element can influence accessibility as well. Given these challenges, when the visitor's disability cannot be accommodated the exhibition becomes meaningless to them.



*Courtesy of Museum of Modern Art*

*All visitors can access the exhibitions at the Museum of Modern Art regardless of their mobility.*

Because immobility can affect someone either temporarily or permanently, an immense population of potential visitors may be missing opportunities to connect with exhibitions resulting from insufficient accommodations. It's not that museum staff don't want to serve visitors with disabilities - they are often emphatic about their support for these visitors - but many simply do not have a methodology or set of standards for achieving it. Universal design can help designers establish a successful methodology for creating meaningful exhibitions.

Thankfully, India has established national legislation to encourage designers to work towards the "creation of a barrier-free environment" for all people.<sup>23</sup> Established in 1995, the Persons with Disabilities Equal Opportunities, Protection of Rights and Full Participation Act, or PWD Act, was designed to recognize that accessibility is not an option, but a legal right of the people. It was

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<sup>23</sup> "Centre for Legislative Research and Advocacy." *Disabled People's International Asia-Pacific Region*. [http://www.dpiap.org/resources/pdf/dpbriefnoclra\\_11\\_05\\_16.pdf](http://www.dpiap.org/resources/pdf/dpbriefnoclra_11_05_16.pdf) (accessed August 10, 2014).

meant to finally provide an inclusive environment for those living with disabilities.

The unprecedented legislation brought new hope for equality to the people of India. However, The Ministry of Social Justice and Empowerment of the Government of India has acknowledged a major limitation of this law: "The PWD Act adopts a narrow definition of disability and confines it to 'blindness; low vision; leprosy-cured; hearing impairment; locomotor disability; mental retardation; and mental illness.'"<sup>24</sup> The problem with this definition is that it treats each disability the same as any other. Disabilities are as diverse as the people who have them. A fractured leg is different from paralysis; a heart condition is different from a seizure disorder. Universal design becomes crucial in addressing these conditions accordingly when planning and creating your exhibition space for any visitor who may come through the door.

In contrast, India's Disability Convention works with an understanding that "disability is an evolving concept".<sup>25</sup> Instead of singling out specific conditions as disabilities, thereby ignoring others, it applies a broader, more inclusive definition. It addresses the needs of people "who have long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in

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<sup>24</sup> *Raha, Swagata. "India Needs New Legislation on Disability Rights." InfoChangeIndia. <http://infochangeindia.org/disabilities/analysis/india-needs-new-legislation-on-disability-rights.html> (accessed August 11, 2014).*

<sup>25</sup> *United Nations. "United Nations Enable - Chapter Two: The Convention in Detail." United Nations. <http://www.un.org/disabilities/default.asp?id=223> (accessed August 11, 2014).*

society on an equal basis with others".<sup>26</sup> With this new definition in mind, applying universal design principles will accommodate *all* museum visitors, having considered the visitor's physical limitations as well as their abilities.

But for some people, their disability prevents them from even physically getting to the museum. For this reason, accessible, interactive websites that allow homebound people to visit the exhibition are vital in fulfilling museums' missions of educating and fostering an appreciation for the collections. For example, the Metropolitan Museum of Art's website is exceptionally thorough and clear. Visitors can browse The Met's collection of over 400,000 artworks through five main criteria. Access includes individual images as well as lectures by department curators on various concepts exhibited in the collections. These range from the sense of touch to the concept of boundaries.

## **Visual Impairments**

It is important to understand that all impairments and disabilities are diverse in their effect on a visitor's experience in an exhibition. For example, a visitor who wears reading glasses has different challenges than a visitor who has glaucoma. A more thorough understanding of visual impairments will aid designers in serving this group successfully.

Visually impaired visitors can be particularly challenged in object-based museums where, in contrast with concept-based museums, the focus is primarily on the physical nature of the collection and

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<sup>26</sup>Raha, Swagata. "India Needs New Legislation on Disability Rights." *InfoChangeIndia*. <http://infochangeindia.org/disabilities/analysis/india-needs-new-legislation-on-disability-rights.html> (accessed August 11, 2014).

relies primarily on vision to experience and understand. Consequently, these visitors may not be able to experience colors, brightness, size, or form. This instantly hinders the experience for visitors who are visually impaired.

India's PWD Act specifically addresses people with blindness and low vision, but because of the actual range of those conditions, the law leaves loopholes for museums and their exhibition designers to determine for themselves what qualifies as a disability. It is important for designers to use this opportunity to consider and consult visitors about their experiences in this uniquely cultural and educational environment.



*Courtesy of this author*

*Location: University of Pennsylvania Museum of Archaeology & Anthropology*

*Some visually-impaired visitors take the opportunity to touch the collection while others prefer to connect through storytelling.*

The problem that museums face as a result of not designing with blind and visually-impaired visitors in mind is an interesting one. These museums often design with the assumption that, because they are object-oriented, visitors have come solely to look at the art or artifacts. However, as one blind visitor to the University of

**Pennsylvania Museum of Archaeology and Anthropology recently pointed out, there is never only one way to connect with an exhibition. That is not to say that visually-impaired people prefer not to engage at all or else they would not have visited. Visitors can and should have the opportunity to engage in a variety of ways with the collection through all of their functioning senses. This particular visitor, although he had the opportunity to touch the artifacts as part of the Museum’s “Touch Tour” program, chose to sit and listen to stories about the artifacts he could not see.**

**Within universal design, concept-based design and sensory-oriented exhibition design will help enhance the experience of visitors with visual impairments as well as sighted visitors. By investigating, analyzing and presenting the concepts behind the collections, regardless of the discipline, visitors will be directly impacted by the exhibition. These concepts and corresponding objects can be conveyed through more layered content through various multi-media and multi-sensory applications. Some of these aspects can be communicated through tactile elements while others may be creatively communicated through descriptive audio materials.**



*Courtesy of Travelers411*

***Clear paths, appropriate lighting and tactile elements can help all visitors have the best possible experience.***

**The Franklin Institute (Philadelphia) consistently achieves a connection with visitors in their temporary exhibitions. In 2014 the traveling exhibition honoring the centennial of the Titanic arrived at the museum. Its clear focus on sensory design immediately broke barriers for visitors with disabilities, allowing them to experience the exhibition in the same ways as visitors without disabilities.**

**Smart thinking was applied to this exhibition design. Decisions as simple as adding music and altering the room temperature and lighting to convey the difference between being on the ship and being in the frigid North Atlantic Ocean made an immediate impact on visitors' understanding of and their connection to the content. Additionally, the sound of the ship's gears grinding caused vibrations in the floors of some spaces in the exhibition. This resonated emotionally with visitors while guaranteeing the preservation of the collection. These tactile aspects of the space helped not only alleviate challenges for visually-impaired visitors, but visitors with hearing impairments as well.**

## **Hearing Impairments**

**Hearing impairments are sometimes referred to as an "invisible disability." It is important to understand that much physical and mental impairment may be invisible. The Invisible Disabilities Association defines an invisible impairment one that is "not always obvious to the onlooker, but can sometimes or always limit daily activities, range from mild challenges to severe limitations and vary from person to person."<sup>27</sup> This means that you may not be aware of the existence of the disability until you begin interacting with the**

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<sup>27</sup> *Invisible Disabilities Association. "What is an Invisible Disability?" Invisible Disabilities Association. <http://invisibledisabilities.org/what-is-an-invisible-disability/> (Accessed September 12, 2014).*

person. Many museums assume that if a person can see, they can connect with the exhibition. However, when you consider all of the audio-based media in an exhibition used to communicate specific ideas, the experience is incomplete for visitors who are hearing-impaired.

Even if the visual media were subtitled, the tone, volume and pitch would be missing. A large majority of what someone says is understood through these characteristics, not the words. Additionally, the speed at which the communication is conveyed would be lost. Each of these elements of sound conveys an emotional aspect of the information being communicated, thereby impacting the visitor more deeply than simply reading. Visitors who are hearing impaired cannot partake in any of these channels of learning and connecting, and are therefore limited to literature which typically goes no further than the paragraph-long labels accompanying the exhibits. Ultimately, if a person who is hearing impaired is experiencing the exhibition, they are receiving a minimum of what is being communicated. This may be only some vocabulary and the body language and facial expressions of the person communicating it.



*Courtesy of the Metropolitan Museum of Art  
Providing the optimal means of communication for visitors is key in connecting them with the exhibition.*

**Concepts and theories presented in exhibitions are often complemented by discussion and reflection between the visitors and museum professionals. Visitors benefit from these conversations, gaining new insight and perspective into the collections by discussing and reflecting on these theories and ideas presented in the exhibition. However, if hearing-impaired visitors do not have a means of communicating about these ideas, the goal of exhibiting the material is not achieved.**

**Lectures or even recited directions for interactive designed to complement the collections become difficult or impossible for hearing-impaired visitors to understand and respond to accordingly. Stories about the artworks and their creators are lost, mission to foster education and appreciation for the collections. Imagine a museum tour without sound, without acoustics, without emotion. These challenges can be alleviated; fostering independence, through various assisted listening devices, captioning and sign language translation as well as the integration of the visitor's other senses.**

**The Museum of Fine Arts Boston is doing an impeccable job of serving their hearing-impaired visitors through a multitude of accommodations. It offers hearing aids and induction loops as well as free monthly guided tours in American Sign Language and onscreen text translations of audio tours. Although the Museum could benefit further from integrating the visitor's sense of smell, each of these tools helps create an environment of equal opportunities for hearing-impaired visitors to experience the exhibitions just as deeply as those without hearing impairments. Accommodations are also made through the Museum's "Access to Art" tours. These are "visitor centered, interactive tours designed for**

groups with disabilities."<sup>28</sup> Caretakers of disabled visitors are also welcomed to these tours, which are offered during the Museum's regular hours. Pre-registration is required, and there is no fee to participate.

Finally, the Museum has built partnerships with community organizations who serve people with hearing impairments. This may be the most important means of achieving optimal accessibility in the exhibition design. Partnerships create a stronger understanding of the challenges that are being, or need to be, addressed while providing more opportunities for new ideas to emerge.

The Museum has built partnerships with the Hearing Loss Association of America and the Association of Late-Deafened Adults to thoroughly serve hearing-impaired visitors. The Association of Late-Deafened Adults is committed to communication and acceptance of the hearing-impaired community while the Hearing Loss Association of America works to "eradicate the stigma associated with hearing loss."<sup>29</sup>

## **Mental Impairments**

The exhibition design can often be improved for visitors with sensory-oriented disabilities by adding or altering certain elements to maximize the accessibility of information. These accommodations, although beneficial to many physically-impaired visitors, may not meet the needs of people with a mental impairment. Touch, sound, and visuals can help some mentally-impaired visitors but not others.

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<sup>28</sup> "Accessibility." *Museum of Fine Arts, Boston*.

<http://www.mfa.org/visit/accessibility> (accessed August 14, 2014).

<sup>29</sup> "Who We Are." *Hearing Loss Association of America*.

<http://www.hearingloss.org/content/who-we-are> (accessed August 20, 2014).

**The list of mental challenges is long and varied. Just a few examples are Post-Traumatic Stress Disorder, Alzheimer's Disease, Autism Spectrum Disorder, and cerebral palsy.**

**Mental disabilities affect visitors in a unique way. They impact the person's ability to communicate, to give or receive information. This is crucial to keep in mind when designing an exhibition since the basic purpose of an exhibition is to share information with the visitors.**

**By not considering the needs of mentally-impaired visitors in exhibition design, museums are limiting their creative thinking. More importantly, creating standard practices that do not address the needs of people with mental impairments can cause visitors unnecessary and extreme stress. For example, certain sounds, colors or even movements may be helpful for visitors with Alzheimer's disease, but have an adverse effect on those with Post-Traumatic Stress Disorder or Autism Spectrum Disorder. By applying universal design to the exhibition, museums are addressing the needs of all visitors.**

**Mentally-impaired visitors experience the world differently. This may cause them to have an entirely different approach to an exhibition space. Although this may cause some challenges in design, it also offers opportunities. Because of these visitors' approach to spaces, images and language, they may offer new means of viewing, interacting and interpreting the exhibitions.**

**To make the exhibition more accessible for mentally-impaired visitors, keep it simple. This does not mean create elementary spaces that do not challenge visitors. Challenge them in the right**

**ways. Simplify the exhibition design in concept, keeping a focus on the big idea on which it is based. This enables and empowers all visitors to understand and connect with the big idea in the exhibition and analyze it in their own way and on their own terms.**



*Courtesy of this author*

*Location: Brooklyn Museum of Art*

*Simplistic exhibition design accommodates all visitors while keeping their interest on the content.*

**It is recommended to post appropriate signage that alerts visitors in advance to any sensory-oriented areas of the exhibition. These may include, but are not limited to, bright colors, loud or high-pitched sounds, tight spaces, and fast or vibrating elements. With universal design, all visitors can experience an exhibition without being subjected to personally harmful elements and without having to necessarily remove those elements if they are pivotal to the exhibition design.**



*Courtesy of this author*

*Location: Brooklyn Museum of Art*

*Interactive elements can engage each visitor in a way that is meaningful and personal*

**Integrating tactile and interactive elements into an exhibition can also be very beneficial for visitors with mental disabilities. "Touching, both physically and imaginatively, creates deep levels of reflective meaning; it brings the experience of time, place, and relationship into the foreground. In a museum, this contributes to greater consciousness and intentionality of the visitor around the meaning and interpretation of objects, as well as contributing to the greater purpose and value of the human experience."<sup>30</sup> Also, allowing the visitor to touch things in the exhibition focuses their attention on what would otherwise be overwhelming. Touching provides a sense of concreteness, a sense of certainty in an otherwise unpredictable environment. For visitors with mental disabilities, such as Autism Spectrum Disorder or Post-Traumatic**

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<sup>30</sup> *Kiersten Latham & Elizabeth Wood. "The Thickness of Things: Exploring the Curriculum of Museums Through Phenomenological Touch," Journal of Curriculum Theorizing (2011): 12.*

**Stress Disorder, this uncertainty can be off-putting or even frightening.**

**This does not mean visitors should necessarily be permitted to touch the objects. However, touch *has* found its way directly into museum exhibitions, from hands-on replicas at the Tactual Museum of Athens to the Reminiscence Kits at The Open Museum in Glasgow, Scotland. In New York, The Museum of Modern Art has established the Common Senses Studio adjacent to their main building. Common Senses Studio is an entirely tactile space for all visitors to participate in hands-on activities that complement the exhibitions.**

**Also, consider adding olfactory elements, those oriented around one's sense of smell. Experiences involving scents are underused in exhibitions. However, smell is the most powerful in inducing memories. Our sense of smell develops from the same area of the brain as "where emotions are born and emotional memories stored."<sup>31</sup> "Moreover, numerous studies have shown that smell memory is long and resilient, and that the earliest odor associations we make often stick."<sup>32</sup> Therefore, including olfactory experiences in an exhibition can have a significant impact on the visitor, creating personal meaning and connections.**

**The Brooklyn Museum of Art (New York) accommodates the needs of mentally-impaired visitors with spacious yet simplistic exhibitions and universally accessible areas. All of the exhibitions have open entryways and rest areas. These characteristics offer both a freeing and calming effect on the visitor. Every gallery allows the visitor to move at their own pace, and yet the linear paths make it clear which**

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<sup>31</sup> [http://www.nytimes.com/2008/08/05/science/05angier.html?\\_r=0](http://www.nytimes.com/2008/08/05/science/05angier.html?_r=0)

<sup>32</sup> [http://www.nytimes.com/2008/08/05/science/05angier.html?\\_r=0](http://www.nytimes.com/2008/08/05/science/05angier.html?_r=0)

path the visitor should follow to get to the next space. The Museum's Education Touch Collection offers visitors a tactile and interactive experience where the visitor can freely participate in activities that complement the exhibitions and have a more personal connection to the content.

The exhibition design at the Museum does not have loud or unexpected noises or movements. A natural sense of order is common in each space. This is especially beneficial for visitors with dementia, Alzheimer's Disease, Post-Traumatic Stress Disorder, cerebral palsy and Autism Spectrum Disorder. If the visitor needs a more structured approach to avoid feeling overwhelmed, staff can provide tailored guided tours specially designed for visitors with mental disabilities. It is clear that regardless of what mental disorder a visitor may have, the Museum provides them with the same quality of experience.

## **Conclusion**

It is clear that without universal design, visitors are faced with an environment of limited opportunities. All visitors simply do not connect with objects and the stories they tell in the same way. As a result, visitors may be unable to connect with the presented information through a limited set of interpretive tools. Many museums are clearly trying to improve their accessibility, primarily through specially designed programs. Sensory-oriented exhibition design can enhance these efforts. Conducting evaluations with visitors with impairments can help establish ensure accessibility by establishing which interpretive tools are most helpful in communicating and interpreting information in the exhibition.

**Universal design, when integrated directly into exhibitions, directly contributes to museums achieving their goals. Universal design expands the visitor's opportunities to connect with, and at times participate in, the exhibitions regardless of the visitor's abilities. It is important to understand that the design may change from one exhibition to the next depending on the goal. Each exhibition should be developed with the understanding that all the senses and functions of the body operate simultaneously. "When you put all of your senses together, you have the full appreciation of a work of art."<sup>33</sup> Interpretive tools can enhance the experience of all visitors when combined with other sensory-based experiences. When the designer learns how to translate the language of the visitors, whatever form that language takes, the museum will evolve and be transformed, because visitors will understand the information presented in the exhibition.**

**The design choices should ultimately depend on what the goal is for the exhibition in addition to the physical and psychological needs of every potential visitor. Then, consider which methods of interpretation visitors can utilize in the exhibition. Keep in mind that what works for one group may not work for another. Universal accessibility may be achieved through a few types of media or a multitude of informational tools. In some exhibitions, the primary means of interpretation may be reliant simply on the visitor's own physical relationship to the space itself and require a minimal number of interpretative tools installed within the space. Whatever**

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<sup>33</sup> **Wardropper, Ian. "Connections/Touch." *The Metropolitan Museum of Art*. <http://www.metmuseum.org/connections/touch#/Complete/> (accessed September 5, 2014).**

**design decisions are made, guarantee that all visitors can have the same level of experience in the exhibition.**



***Layla-Aurora Ballner***



***Megan MacNeill is a museum professional from Philadelphia, PA with nearly a has been decade of experience ranging from exhibition design to collections and education. She is currently exploring the intersection of museum design and public programming, her work on museums and autism was inspired by two summers at a summer camp in the Adirondacks for children with life-threatening illnesses. MacNeill received her BFA in photography from the New York State College of Ceramics at Alfred University in Western NY and her MFA in Museum Exhibition Planning and Design from the University of the Arts in Philadelphia, PA***

## **Designed for Autism: Home Museums can Incorporate Universal Design into their Design Process and Exhibitions.**

***Megan Tayler MacNeill***

**Museums professionals have the opportunity to utilize universal design practices within their design process to create effective, comfortable, and supportive museum environments for those with ASD (Autism Spectrum Disorder). I am a firm believer that museums cannot only be places of education but ones of restoration, respite, recovery, and reflection. Heumann Gurian argues that museums have a civic responsibility to create spaces that facilitate safety and peace within our communities. Incorporating universal design practices can help those with ASD find a safe space to explore and express themselves and become better equipped for experiences outside museum walls. Design decisions that are helpful and accessible to the ASD community may, in turn, help those outside the autism spectrum by creating comfortable, accessible, and educational museum exhibitions that successfully engage all visitors. What benefits a smaller visitor community may help the larger visitor population.**

**Industrial designers were among the first to adapt universal design principles. "Unlike the client-driven world of the architect or interior designer, the industrial designer must appeal to the end-user."<sup>34</sup> The same holds true for exhibition designers. Designers who constantly think about the end consumer are in an excellent position to enforce**

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**34 "History of Universal Design." Institute for Human Centered Design. January 1, 2014. Accessed August 14, 2014.**

**and insist on useable environments and objects for the autism community and others.**

**U.S. architect Ron Mace was the first to link universal design to accessible design. Mace was diagnosed with polio as a child. He believed that universal design was “not a new science, a style, or unique in any way. It requires only an awareness of need and market and a commonsense approach to making everything we design and produce usable by everyone to the greatest extent possible.”<sup>35</sup> Mace’s point about usability hits home to museum designers; if the spaces we create are inaccessible to part of the visitor population, then we are only reaching part of our intended audience. Museum professionals have worked long hours to provide visitors with opportunities to learn and interact with the knowledge, objects, and exhibitions within our institutions. Financially, it is counterintuitive to invest resources in an exhibition only to have the end product useable by only part of a museum’s audience.**

**Universal design “increases usability, safety and health through design and services that respond to the diversity of people and abilities.”<sup>36</sup> There are seven principles of universal design; equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use. “Universal Design has most commonly been applied in connection with physical or sensory impairments and thus, at least in practice, does not specifically address the needs of individuals with significant cognitive impairments. Yet an increasing**

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*35 "History of Universal Design." Institute for Human Centered Design. January 1, 2014. Accessed August 14, 2014, pg 3.*

*36 Kanics, Ingrid. "Universal Design." Lecture, from Kanics Inclusive Design Services, LLC., Philadelphia, PA, April 13, 2011.*

number of people suffer from cognitive impairment and could benefit from environments that are more usable."<sup>37</sup> For those with ASD, universal design can also be interpreted to refer to differences in learning and communication styles.

In the new era of DSM-V (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition), what can we do to continue the conversation of universal access and develop new opportunities for those with ASD, both within the museum and outside? We, as a community of museum professionals (not just designers but curators, educators, and the like) should steer away from the minimum standards that the ADA (Americans with Disabilities Act, 1990) has set. How can we integrate and embrace visitors with ASD and offer creative, accessible designs? What follows are a few ideas for making more accessible museum spaces for the autism community.

### **Museum as human environment**

Museums are internal environments just like houses, schools, and shopping malls. There are environmental preferences that are innate within humans, be it someone diagnosed with ASD or without. By incorporating these environmental preferences into museum design we can create spaces that satisfy deep needs and alleviate some of the sensory and environmental needs of a museum's audience.

One concept of environmental preferences, prospect-refuge theory, was first introduced in the 1970s. "It was believed that environments that afforded a certain amount of prospect (open view) and refuge (concealment, protection) offered an evolutionary

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<sup>37</sup> Preiser, Wolfgang F. E. *Universal Design Handbook*. New York: McGraw-Hill, 2001. 22.1.

advantage to humans."<sup>38</sup> These "evolutionary advantages" are still used today. Porches on houses are an excellent example.

While sitting on a porch you are relatively protected from the elements. Likewise, because the porch is elevated, you can survey your surrounds and see any impending "attack." As human beings, we tend to migrate towards these areas that resemble borders. By incorporating areas of prospect and refuge, nervous visitors have a better chance of feeling safe and protected while still interacting with the exhibition. Areas of prospect-refuge will allow them to look out on the activities and safely engage by watching or doing small activities. These areas allow visitors to decide if they feel safe enough to venture out into other museum areas or exhibits. These spaces can also be used as cool-down rooms; similar cool-down areas are provided at many children's museums that actively invite the ASD community to their space. Cool-down rooms allow visitors to de-escalate safely without having to leave the museum. By providing a cool-down room and a place to regroup, visitors are able to stay longer.

Another way of looking at our interior environment is discussed in Julie Moir Messervy's *The Inward Garden*<sup>39</sup>. Messervy discusses the different archetypes of landscape and how they relate to our perception of safety and comfort. These perceptions also have an element of prospect-refuge theory. Three of her archetypes relate to interior spaces and could be applied to a museum setting.

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*38 Petherick, Nathan. "Environmental Design and Fear: The Prospect-Refuge Model and the University College of Cariboo Campus." Western Geography 10, no. 11 (2001): 89-112.*

*39 Messervy, Julie Moir, and Sam Abell. The Inward Garden: Creating a Place of Beauty and Meaning. Piermont: Bunker Hill, 2007. 28.*

## **The Cave: Inside to Outside**

Similar to prospect-refuge theory, this space is believed to be comfortable because of the security it provides. Our first experiences interacting with our environment come in cave-like form, from cribs and cradles to strollers. Another argument that supports our desire for cave-like transition spaces comes from Clare Vogel's *Classroom Design for Living and Learning with Autism*. "Just as a porch separates the house from the street, a transition space in the form of an alcove or differentiated hallway separates the classroom from the main corridor, providing important environment information from a safe, defensive position. Many adults with ASD [autism spectrum disorder] reported that having a tight, contained space nearby ... gave them a sense of control and release."<sup>40</sup>

## **The Harbor: Enclosure with a View**

This space is believed to feel safe because of the feeling it evokes: sitting on our parents' laps, complete with a 180-degree view and a high vantage point. With the protection of our parents behind us we feel able to visually explore our world. Some with ASD need to prepare themselves before entering a new experience; some museums are experimenting with social stories, a short narrative about what someone will see when visiting a museum. The harbor provides a three-dimensional social story, enabling the visitor to see what he may encounter before having to set foot in the space.

## **The Promontory: At the Very Edge**

"Most of us felt exhilarated by this daring vantage from which we could scan the world [crawling, walking], yet secure in the

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<sup>40</sup> Vogel, Clare L. "Classroom Design for Living and Learning with Autism." January 11, 2012. Accessed May 2008.

knowledge that we were connected still to the mainland represented by our parents and caretakers.”<sup>41</sup> Piers, the bow of a boat, and peninsulas all provide this promontory sense. In a museum setting, climbing structures and lobbies overlooking exhibitions can provide a similar feeling. Providing opportunities, such as these three archetypes, and incorporating ideas from prospect-refuge theory can help satisfy visitors’ environmental needs and help create spaces that feel safe.

One means of incorporating the ideas of prospect and refuge within an exhibition is by creating higher walkways and smaller alcoves. A higher walkway provides kinesthetic activity, while also allowing visitors to see the entire activity below and the exhibition in front of them. Creating clear walkways allow for visitors and caretakers to watch their companions explore without having to fit through tighter spaces. Shorter tunnels and walkways allow visitors to experience spaces without getting claustrophobic or scared. By installing both ramps and stairs, the museum can ensure that this experience is accessible to all. Creating points of refuge is incredibly important for an accessible exhibition. Visitors with ASD may want to retreat and find spaces that are less daunting. By creating smaller alcoves, visitors have the opportunity to feel safe and build up confidence to venture out into the larger spaces. Small spaces that provide room for small groups could allow visitors to interact together without distractions. Pocket doors can allow these alcoves to quickly and easily become enclosed spaces. By allowing visitors access to these doors, the museum can ensure that these alcoves become as private as needed. These intimate settings can provide learning

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*41 Messervy, Julie Moir, and Sam Abell. The Inward Garden: Creating a Place of Beauty and Meaning. Piermont: Bunker Hill, 2007. 28.*

**opportunities and museum engagement on a single-family level. Semi-translucent doors can provide the privacy desired while still allowing visitors to not feel completely secluded from the exhibition and to allow other visitors to know that the alcove is occupied.**

**These designs present an opportunity to talk with visitors about ASD and how ASD can affect the visitor experience. Creating a design that is also transparent in terms of communication can help the museum expose the community to this new experience for a different audience and foster awareness and understanding.**

**A prototype space would also provide those with ASD with a comfortable informal learning environment. Informal learning spaces are incredibly important to an audience with ASD, one that frequently faces challenges when it comes to formal education. Museums have an opportunity to embrace these informal education needs. A smaller space or redesigned gallery provides the host museum the opportunity to tightly control conditions and properly observe and survey museum visitors' opinions of the museum's additions and accommodations.**

**In the past few years many articles have been published about research into the different ways in which an environment can be altered to meet the needs of those with ASD. In what ways can the museum field learn from the education field and absorb some of their recommendations? One option could be an extra or additional space that would benefit audiences with ASD. By adding this experience to the rest of the museum, the museum would gain more control over the space's adjustments (HVAC, lighting, materials used, noise levels); a physical social story. A separate experience**

will allow visitors to relax, knowing that they are not being judged or questioned about their needs or behaviors. This worry came up frequently during my research on designing museum experiences for children with ASD. Parents want to have an experience in a museum as well, but are often preoccupied with ensuring their children's behavior does not scare or frustrate other visitors.

By separating the experience from the rest of the museum, perhaps in an extra classroom or meeting space, parent and child have the opportunity to ease into the rest of the museum while knowing there is a safe place where they can enjoy their time together. This will be an interpretive space, a prototype, elements of which could eventually be applied throughout the home museum, and repeated in other museums. This space will create new ways to learn about the content of the exhibition. The content of this prototype exhibition should coincide with other exhibitions within its host institution. As a prototype exhibition, this experience could guide other efforts to a museum's existing exhibitions to be more accessible to visitors with and without ASD.

Note that this is by no means a way of segregating or removing those with ASD from experiencing the museum as a whole. This is simply one way to alleviate many of the factors that create resistance to visiting and engaging with a typical museum exhibition. HVAC controls, lighting, and crowd control can be too complicated, or too out of date, to adjust for visitors with special needs in a large institution. By starting with one singular experience, museums have an opportunity to experiment and include visitors in the conversation about how best to accommodate their needs. Rather than force all visitors to conform to a single experience,

**museums should work to create opportunities for each visitor to individualize his or her experience, be it through engaging with a physical exhibition or an experiential takeaway.**

### **Bringing museum experiences to a marginalized community**

**Before the Diagnostic and Statics Manual of Mental Disorders there was no such thing as a large group of people living on disability, people learned to fit in and society helped make a place for them says John Elder Robinson, an author and longtime ASD advocate <sup>42</sup>.**

**Some opportunities to consider within these exhibitions**

- Do the visitors have opportunities to interact with other visitors?**
- Are low-VOC (Volatile Organic Compounds) materials used in this space?**
- Are the materials durable and replaceable?**
- Do the visitors recognize the purpose of different areas or spaces within the exhibition?**
- Do the visitors benefit from multi-sensory stimulations?**
- Does the exhibition provide sensory integration?**

**With the diagnosis rate of ASD on the rise, the population of adults with ASD will grow as well. Once Americans diagnosed with ASD turn age 21, they are at a significant loss for aid, education, and opportunities to interact with others. Isolation is a significant consideration for those working to help those with ASD. Museums have the opportunity to help those in the autism community feel less isolated by creating comfortable spaces that facilitate engagement and learning. We as a museum community need to learn to make a place for those with Autism Spectrum Disorder.**

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*42 Walton, Alice G. "Living Life With Autism II: Perspectives." **ForbesWoman**, December 9, 2011.*

*Accessed August 14, 2014. [www.forbes.com/sites/alicegwaltton/2011/12/09/living-life-with-autism-ii-perspectives/print/](http://www.forbes.com/sites/alicegwaltton/2011/12/09/living-life-with-autism-ii-perspectives/print/).*



***Megan Tayler MacNeill***

## **BOOK RECEIVED:**

### **1.A New eBook from UniversalDesign.com**

#### ***Universal Design Tips: Lessons Learned from Two UD Homes***

This new electronic book from UniversalDesign.com is filled with tips and ideas that will help guide anyone through the process of designing and constructing their own Universally Designed home. The book was co-authored by John Salmen, AIA, the publisher of *Universal Design News* and founder of UniversalDesign.com, and Ron Knecht, whose durable, energy efficient Universally Designed house was featured in the **January 2012 issue** of *Universal Design News*.

The first section of the book deals with the planning process, providing insight on how to choose a location for the house, consider activities of daily living during planning, best use various types of design professionals, finalize a floor plan and develop a building schedule.

The rest of the book is organized according to different areas or elements of the home (i.e. exterior doors, bathing, and kitchen counters, just to name a few.) Whether designing a whole house or simply remodeling one area, *Universal Design Tips* makes it easy to quickly refer to the relevant section and find valuable tips that ensure success. Each of these sections includes design tips, photos and important lessons that the two authors learned through their personal projects.

John Salmen has been working in the field of accessible architecture and Universal Design for over 30 years, and he put this expertise to good use when remodeling a historic property to create the Universally Designed house he and his wife hope to live in for many years. Salmen's "Home for the Next 50 Years" has been featured in various media outlets: including *The Washington Post*, *Fine*

**Homebuilding, AARP's television show *Inside E Street* and the book *The Accessible Home: Designing for All Ages and Abilities*. Now,**

**readers will be able to explore Salmen's home in even greater detail and apply his experience to their own Universally Designed home projects.**

**Ron Knecht's experience with Universal Design started after his wife of 46 years became ill with cancer. As her health worsened, Knecht learned first-hand the importance of accessibility for maintaining independence, safety**

**and one's quality of life. Before Knecht's wife passed away, she extracted a promise from him that he would move to a Universally Designed house located closer to their daughter. Knecht was underwhelmed by both the houses that he saw on the market and the UD house plans that he found online; he realized that he would have to plan and build a custom house in order to fulfill his promise.**



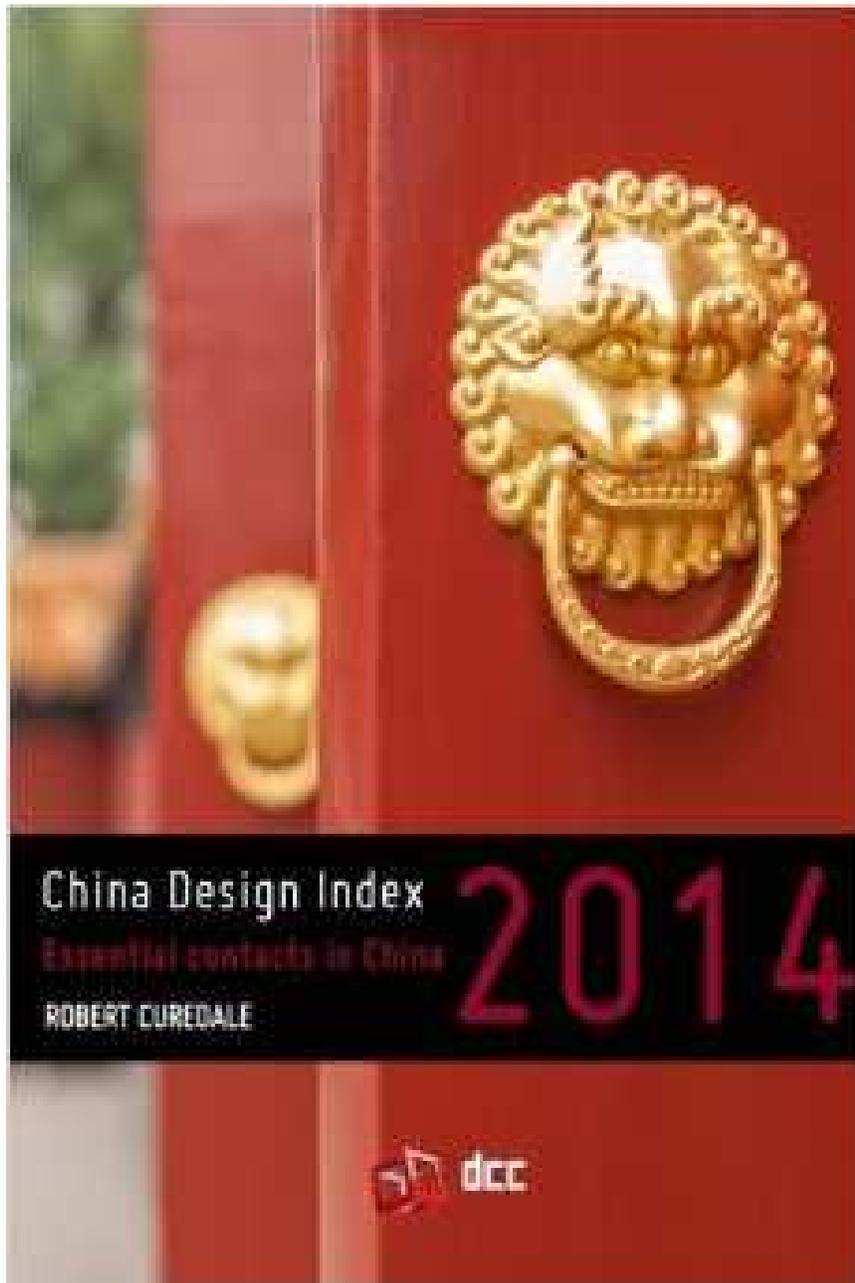
## Universal Design Tips

Lessons Learned from Two UD Homes



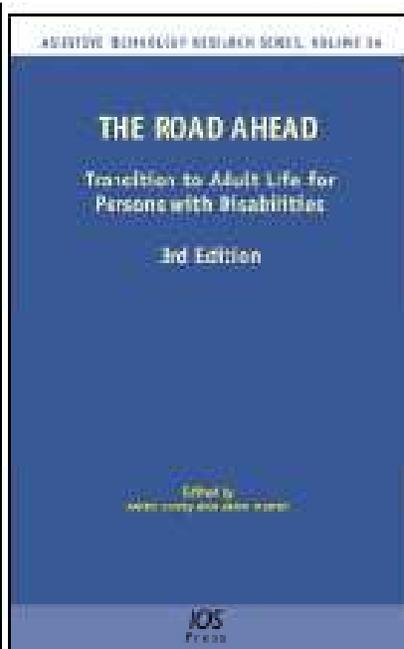
By Ron Knecht & John Salmen, AIA

2.



**China Design Index 2014: The essential directory of contacts for designers Paperback – February 1, 2014 by Robert A. Curedale (Author)**

**3.**



## **The Road Ahead**

Transition to Adult Life for Persons with Disabilities

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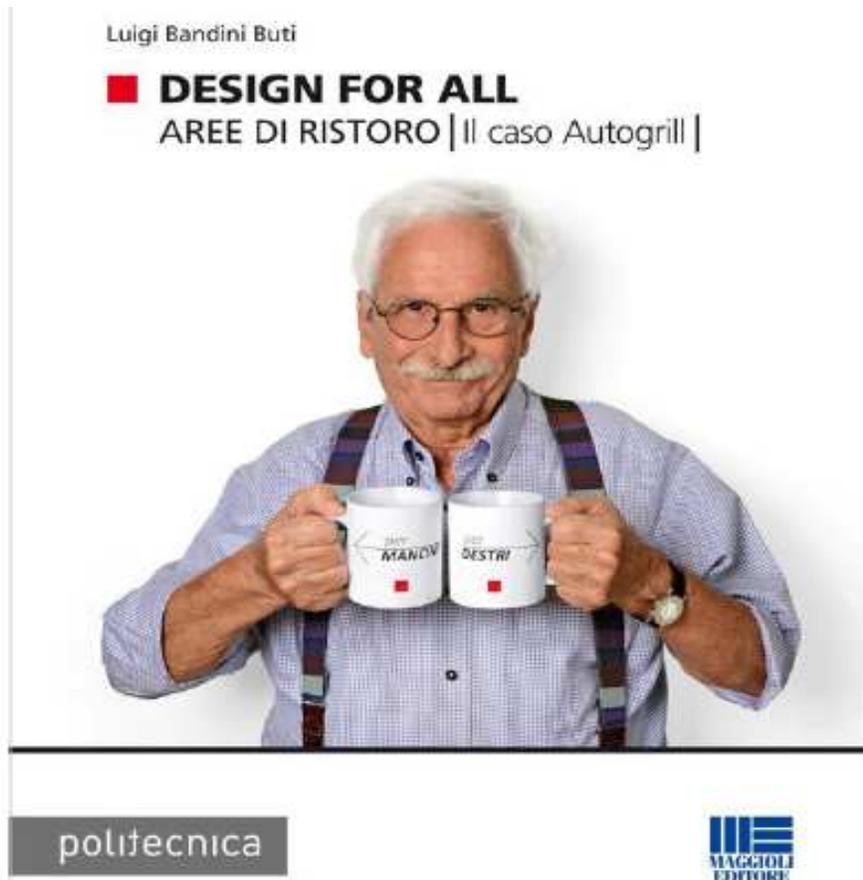
Price: €69 / US\$100 / £59

Successful transition from school to adult life has always been difficult for people with disabilities, especially in the area of employment. The vast majority of people with disabilities are either unemployed or underemployed with low wages and few benefits, and many governments are struggling to find a way of providing employment and benefits to people with disabilities without creating disincentives to work.

This book provides strategies and ideas for improving the lives of people with disabilities, exploring new ways of enabling a successful transition to an integrated adult working life by providing effective instruction and support. Following an introduction which outlines the importance of transition services and meaningful outcomes, topics covered in the remaining chapters include: person centered transition planning; enhancing competence and independence; employment assessment and career development; collaboration between agencies for a seamless transition; independent living and supported living; and community functioning skills.

The book will be of interest to all those who work with transition age students as well as those who work with adults with disabilities and want to enable them to have the best life possible. To paraphrase Helen Keller: "People with disabilities not only need to be given lives, they need to be given lives worth living."

4.



Luigi Bandini Buti

**DESIGN FOR ALL** | AREE DI RISTORO | il caso Autogrill |

Maggioli Editore, 2013

<http://shop.wki.it/risultatoricerca.aspx?indizioricerca=luigi+bandini+buti>

This book has been born following the collaboration with Autogrill that, for its new facilities "Villoresi Est", has developed an innovative, Design for All oriented project. We then realized that the cares foreseen for "all" would not be noted by "the majority".

If you are not on a wheel-chair, or blind, or you are not travelling with a large family or you don't have to look after your old grand-father, you will not be able to appreciate many of the attentions included into the project. It was therefore necessary to make more visible the virtuosity of the planning process and its results, which may not appear obvious to many people.

This publication is not meant to be a mere description, it is rather a critical analysis of the Villoresi Est rest area, included in a context that wants to examine in depth the methods and the means of Design for All.

Its main objective is therefore to use the "Autogrill case" to investigate the necessary steps to develop projects Design for all oriented, hopefully in an authoritative way.

## Inclusive Culture

### **Edmonton Architect publishes - Adult Children's Book—Accessible Architecture: A Visit From Pops.**

Edmonton Architect Ron Wickman launches his first book titled: *Accessible Architecture: A Visit From Pops* at the City Room in City Hall, Tuesday, March 18 at 6 p.m. Ron, son of the late Percy Wickman, MLA Edmonton-Rutherford 1989-2001, is a story written on the focus of Percy and his 3 grandchildren. Ron is best known for his accessible design. His most recent endeavor published by Gemma B. Publishing draws on this knowledge. Edmonton draughtsman Jared Schmidts illustrates with wit and precision the need for a house to be visitable by everyone.

As a child, Ron Wickman learned firsthand about the need for accessibility. His father became paraplegic after being injured by an industrial accident. Ron wheeled his father into many inaccessible places. A longtime Edmonton City Councilor Percy Wickman advocated for people with disabilities throughout his life.

Ron Wickman studied architecture in Edmonton and in Halifax, Nova Scotia, specializing in barrier-free design, designing houses and public spaces that were both beautiful and accessible.

*Accessible Architecture: A Visit From Pops*—is an adult children's book, which demonstrates the three principles for ensuring a house can be visited and enjoyed by everyone equally, including those with a disability. Following Wickman's design and renovation also enables homeowners to age in place.

Visitability principles include

- the front entrance must have no steps;
- all main floor doors must be at least 36" wide
- an accessible washroom must be on the entrance floor.

*Accessible Architecture: A Visit From Pops*, by Ron Wickman, illustrated by Jared Schmidts and edited by Sarah Yates, is published by Gemma B. Publishing, a Winnipeg-based publisher. Gemma B. Publishing creates heroes and heroines living with a disability, in both fiction and non-fiction. The book will be launched at Edmonton City Hall, March 18 at 6 p.m. and available later at Audrey's Books in Edmonton.

Ron Wickman will be available for interviews after the press conference at City Hall. His lecture at the Buildex Conference, Edmonton Expo Centre, Northlands will be held Wednesday, March 19 at 2:30 p.m.

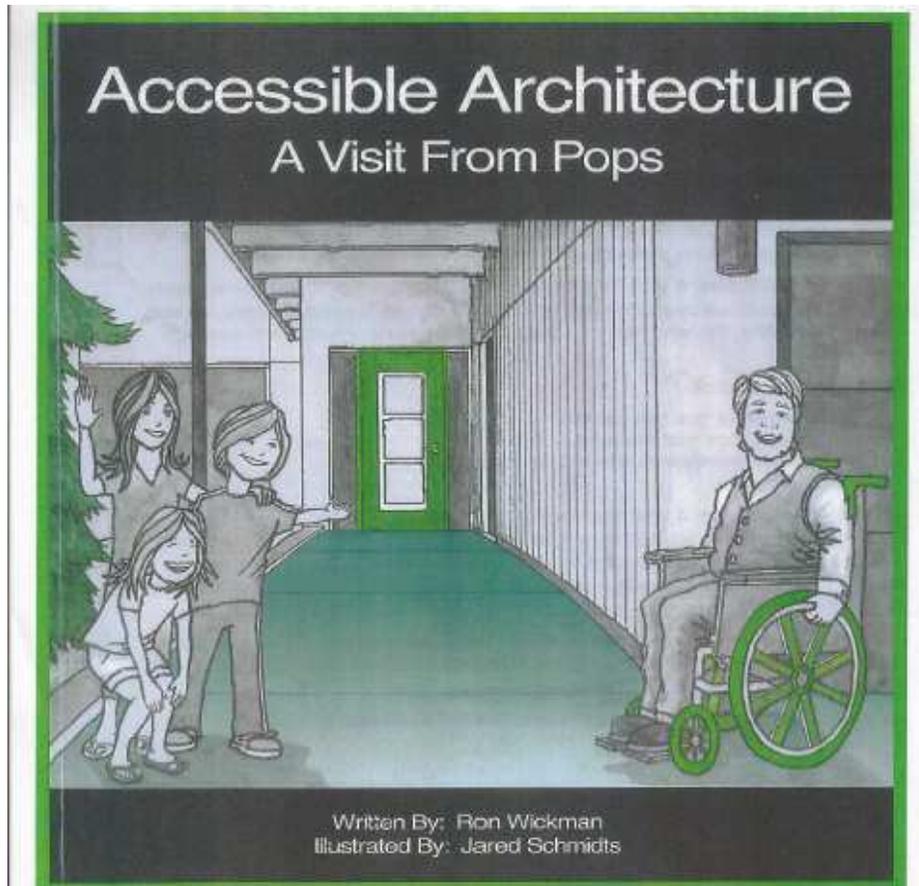
*Accessible Architecture: A Visit From Pops* ISBN978-0-991697-0-8 sells for \$20.

- 30 -

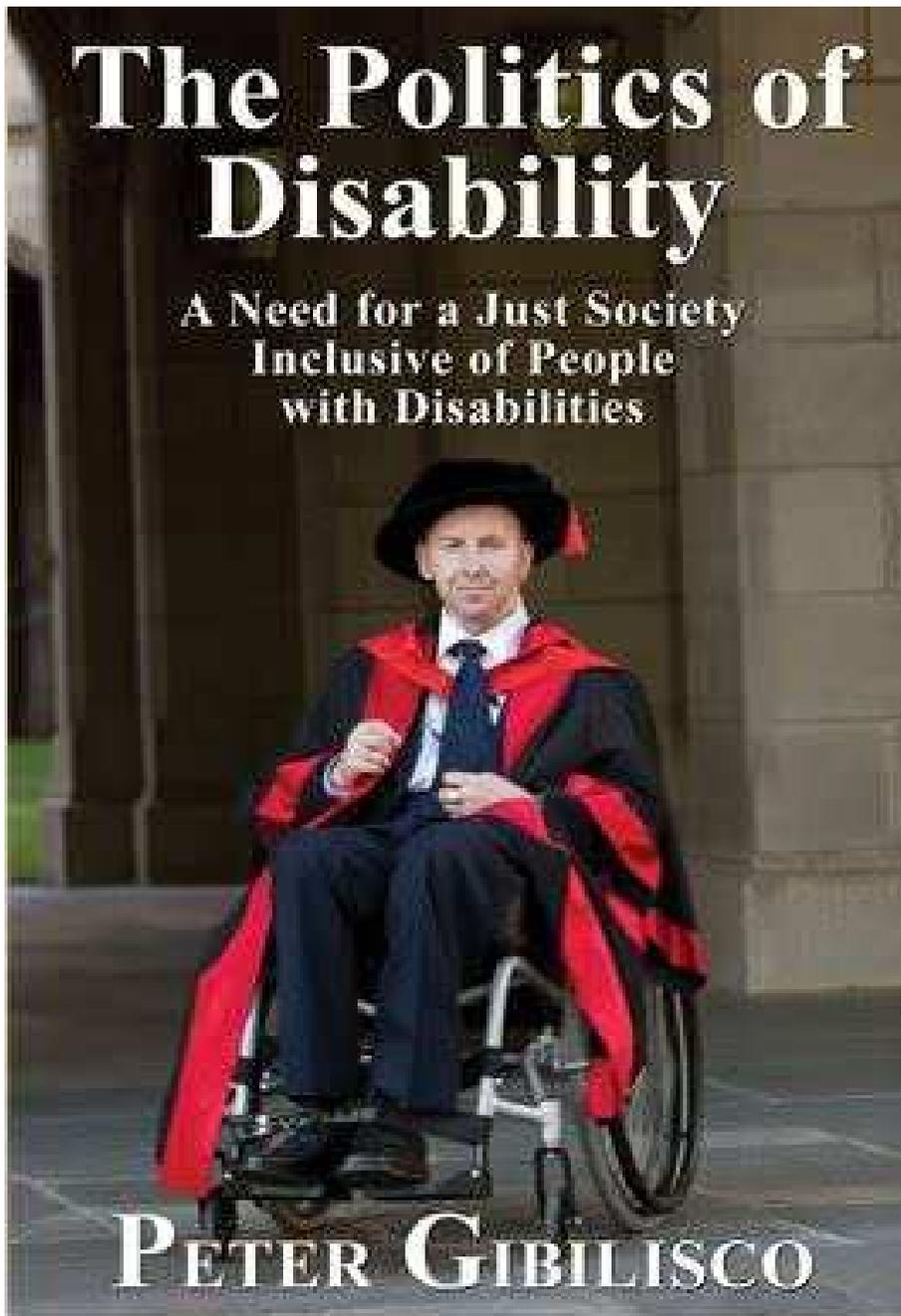
For additional information, contact:

Ron Wickman  
Architect  
780-430-9935  
E-mail: [rwickman@shaw.ca](mailto:rwickman@shaw.ca)

5.



6.



This book will retail for a recommended price of \$19.95 USD ISBN 978-1-77143-155-2, with an ebook version also available at a recommended price of \$7.95 USD ISBN 978-1-77143-156-9. You'll be able to buy it from all the usual places - Angus & Robertson, Bookworld, Fishpond, Amazon, Kobo, iBookStore, and Google's Play Store, amongst others.

## **NEWS:**

### **1. GEZE's Slimchain scoops top design award**

**An innovative chain drive from GEZE has been recognised for its exceptional design at the Universal Design Awards 2014.**



**The versatile Slimchain window drive, which was launched in the UK by GEZE UK last year and is suitable for both natural ventilation and in smoke and heat extraction systems, is one of just 13 winners at this year's event.**

**The awards, which were founded in 2008, are judged by two panels, one of industry experts and a second of consumers. They seek to reward well designed, functional products that are innovative, versatile and easy to use, demonstrate good use of technology, are suitable for international markets and which provide good value for money.**

**Slimchain is part of GEZE's range of window drives, which share a uniform, discreet design and innovative Smartfix installation system. Designed as an 'all-in-one' solution, the aesthetically-pleasing, discreet Slimchain has a broad range of application options and is adaptable enough to fulfil diverse requirements relating to loads, upstroke lengths, opening widths and the widest range of types of installation. With the maximum upstroke of 800 millimetres, it achieves a large aerodynamic opening width, meaning that it can also be used in natural smoke and heat extraction devices (SHEVs) in line with EN 12101-2.**

**Andy Howland, sales director of GEZE UK said: "The Universal Design Awards are particularly sought after because they don't just seek to recognise aesthetics but consider the whole design, including the technology that has been developed and how easy the product is to use.**

**"We are therefore thrilled to have been presented with the award because like all GEZE products the highly versatile Slimchain drive has been designed with the end user in mind. The Slimchain is adaptable and can easily be adjusted to suit each building's individual requirements."**

**This is not the first time that the Slimchain drive has been recognised for its design innovation. In 2012 it scooped awards in both High Quality and Functionality categories of the Plus X Awards and it has been nominated for the German Design Awards. - See more at: <http://specificationonline.co.uk/news-article/7215/geze-uk-gezes-slimchain-scoops-top-design-award#sthash.GmIrpCa4.dpuf> (Author/Source: GEZE UK)**

**2.**

## **New WHO Department to include disability issues**

**The World Health Organization (WHO) Director-General, Dr Margaret Chan, has announced the creation of a new Department for Management of Noncommunicable Diseases, Disability, Violence and Injury Prevention (NVI).**

**This new Department, which results from the merger of the Department of Violence and Injury Prevention and Disability (VIP) and the Department for Management of Noncommunicable Diseases (MND), is officially established as of today.**

**NVI will support regions and countries to strengthen their capacity to address these major health and development challenges in an integrated way in the context of the new realities of the post-2015 era.**

## APPEAL:



Instituted by the India Design Council to recognize Good Design the IMark is awarded to products after evaluating design criteria through a rigorous and systemized process. IMark has been initiated in cooperation with Good Design Awards, Japan.



**India Design Mark (IMark) is a design standard. It is not a contest.  
It is a recognition of Good Design.**

IMark is for everyone. Anyone, from global enterprises, micro, small and medium-sized enterprises or cottage industry, can apply for an IMark. The entry should be mass-produced and should satisfy any two of the three requirements i.e. Made in India, Designed in India or Sold in India. For detailed categories of entry check the IMark website.

**For the industry,** IMark is a business tool, as it recognizes a well-designed product which is trustworthy, valuable, preferred by customers, and is manufactured in a responsible manner.

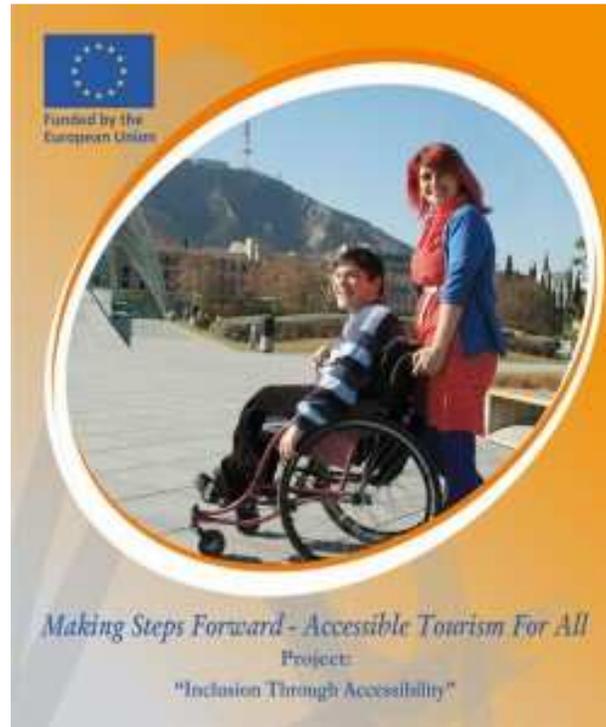
**For consumers,** IMark is a yardstick to ensure good value for money.

**For designers,** IMark is a reward of good work.

**For society,** IMark is an enrichment tool as it promotes responsible ways of manufacturing products and aids industrial development in the country.

## **PROGRAM & EVENTS:**

**1.**



**2.**



### **3.**

#### **Transportation connects us all.**

Whether it's simply getting from home to work or using products shipped over distances near and far, in every region of the world transportation impacts our daily lives.

At first glance, transportation may simply appear to be about the movement of people and goods. But looking deeper, it's also closely linked to equality, access to healthy food and good schools, and wildlife impacts, for example.

As the mobility demands of people and freight have grown, so too has the need for products, systems, and services that will make the transportation sector more life-friendly, for both people and the planet.

#### **Registration is now open**

Learn biomimicry and how to apply it while competing for cash [prizes](#) with students from around the world.

[Register](#) your team for immediate access to the [biomimicry design resources](#) and start developing your design solution today!

### **4.**



**5.**



**6.**



**7.**



**8.**



**9.**

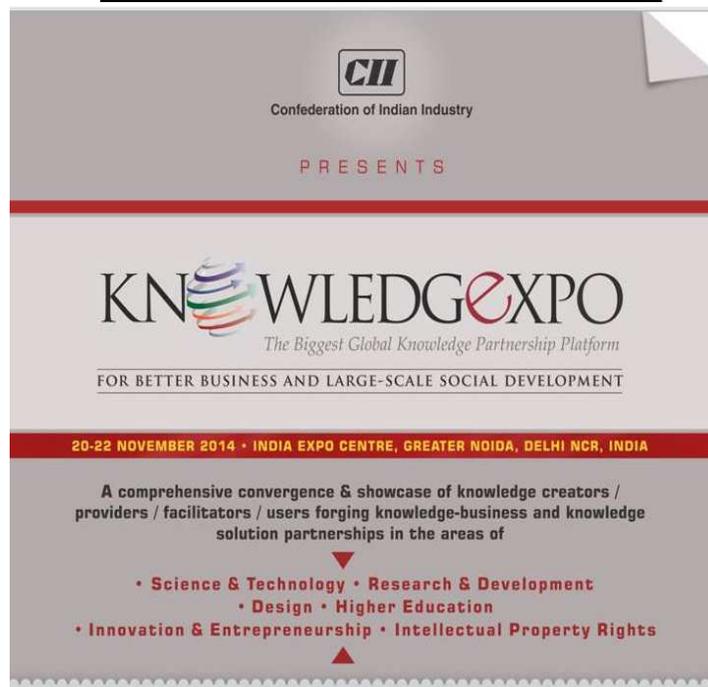


**The Biennale Internationale Design SaintÉtienne 2015**

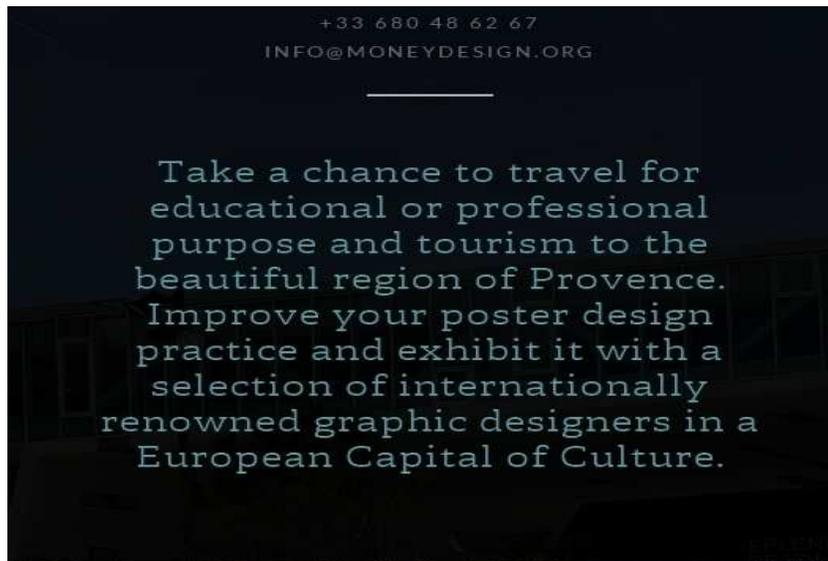
10.



11.



12.



**13.**



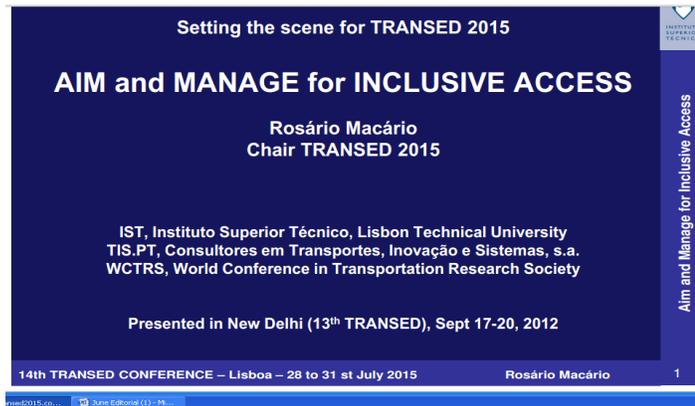
Aiap Summer School con Martin Foessleitner  
Emergency / Emergenza

Da venerdì 27 a lunedì 30 giugno 2014  
dalle ore 10.00 alle 17.30  
Accoglienza summer school venerdì 27 alle ore 9.45  
Accademia di Belle Arti di Genova,  
via Agostino Bertani, 5 - 16125 Genova  
Sono aperte le iscrizioni con sconti per tutti gli iscritti entro il 5 giugno!  
Potete leggere e scaricare il modulo a questo link.

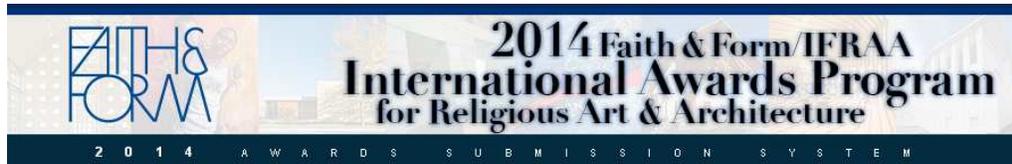
**14.**



15.



16.



Welcome to the  
**Faith & Form/IFRAA International Awards Program  
for Religious Art & Architecture**

The Annual Religious Art and Architecture Design Awards program is co-sponsored by *Faith & Form* Magazine and the Interfaith Forum on Religion, Art and Architecture (IFRAA), a knowledge community of the American Institute of Architects. The awards program was founded in 1978 with the goal of honoring the best in architecture, liturgical design and art for religious spaces. The program offers five primary categories for awards: Religious Architecture, Liturgical/Interior Design, Sacred Landscape, Religious Arts, and Unbuilt Work.

**Awards and Recognition**

Award recipients receive significant recognition including printed and framed citations, recognition at an IFRAA awards presentation, full-page coverage in *Faith & Form's* Annual Awards Issue and project board exhibition at the AIA National Convention.

**Award Categories**

Entries are welcomed and encouraged from architects, landscape architects, designers, artists, students, and consultants. Our entry categories and entry requirements are detailed below.

**The 2014 Jury Panel**

**Chair/Liturgical Designer:** Terry Byrd Eason  
Terry Byrd Eason Design / Chapel Hill, NC

**Architect:** Craig Rafferty  
Rafferty Rafferty Tollefson Lindke Architects /  
St. Paul, MN

**Architect:** Douglas Johnston  
William Rawn Associates / Boston, MA

**Artist:** Michael Berkowicz  
Presentations Gallery / Mount Vernon, NY

**Clergy:** Robb Webb  
The Duke Endowment / Charlotte, NC

**17.**

Design in Motion: the 4th Annual Seattle Design Festival From Sept. 5 to 19



**Mark Your Calendars for the 4th Annual Seattle Design Festival**  
*From Sept. 5 to 19, there will be a little something dazzling for everyone*

**18.**



**19.**

# Typography Day 2015

7th - 9th March 2015,

Organized at IDC, IIT Bombay with support from InDeAs and Aksharaya

<http://www.tyoday.in>

Theme:

**Focus on 'Typography, Sensitivity and Fineness'**

## Introduction

Typography Day will be organized for the eight time from 7th to 9th March 2015 at the Industrial Design Centre (IDC), Indian Institute of Technology Bombay (IIT Bombay) with support from India Design Association (InDeAs) and Aksharaya.

The theme for this year's event is 'Typography, Sensitivity and Fineness'.

**20.**



The voice of blind and  
partially sighted people in Europe

## The Vision for Equality Award

The **EBU Vision for Equality Award** is given to European organisations, institutions, policy makers, enterprises or individuals in recognition of their commitment to protect and promote the rights of blind and partially sighted people and to improve their living conditions. The Award, which consists of a certificate and a piece of art by a visually impaired artist, is presented every four years on the occasion of EBU general assemblies.

Nominations may be put forward by EBU national members and are processed by the EBU Awards Working Group.

CALL FOR NOMINATIONS FOR THE 2015 EBU "VISION FOR EQUALITY" AWARD

21.



## 2nd International Conference on Inclusive Education

9 - 11 January, 2015

Venue: Institution of Diploma Engineers, Kakrail, Dhaka, Bangladesh

Conference Theme: **Achieving Inclusive Education through Post EFA Goals 2015--How Far are We?**

22.



**Open call for designers for the fifth edition**

**Operæ invites design studios, handicraft designers, makers, design publishers and digital designers to participate with their self-productions in the fifth edition of the event, to be held in Turin from the 10th to the 12th of October 2014.**

23.



24.



**5th International Conference on Accessible Tourism (ICAT) 2014 organized by Beautiful Gate Foundation for the Disabled, will be held on December 4-7, 2014, at MBPJ Civic Hall, Petaling Jaya, Selangor, Malaysia.**

**25.**



**26.**

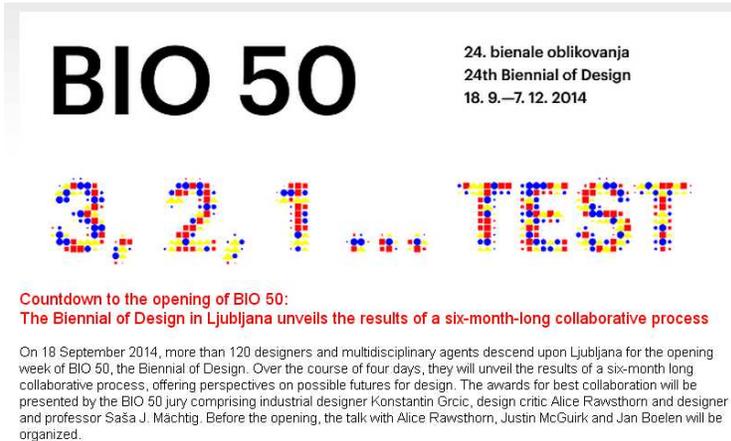


**27.**



**Policies and measures to promote universal accessibility in tourism will be at the center of the 1st UNWTO European Conference on Accessible Tourism, jointly organized by UNWTO and the Government of the Republic of San Marino in November 2014.**

**28.**



**BIO 50**

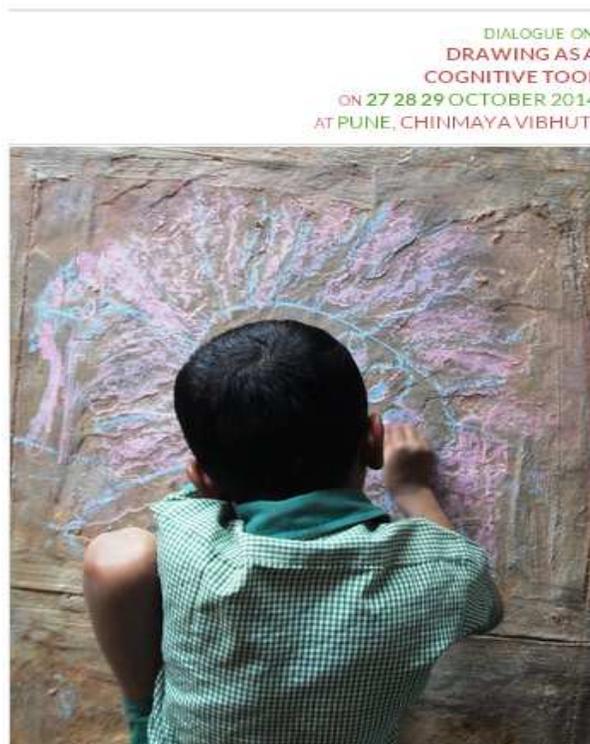
24. bienale oblikovanja  
24th Biennial of Design  
18. 9.—7. 12. 2014

3 2 1 ... TRAT

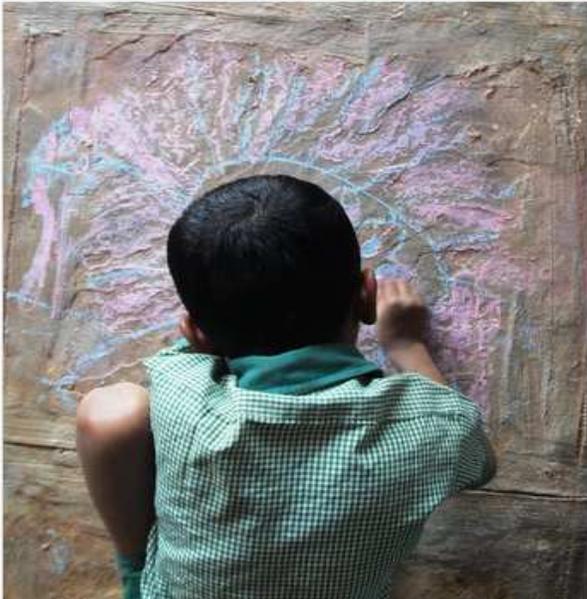
**Countdown to the opening of BIO 50:  
The Biennial of Design in Ljubljana unveils the results of a six-month-long collaborative process**

On 18 September 2014, more than 120 designers and multidisciplinary agents descend upon Ljubljana for the opening week of BIO 50, the Biennial of Design. Over the course of four days, they will unveil the results of a six-month long collaborative process, offering perspectives on possible futures for design. The awards for best collaboration will be presented by the BIO 50 jury comprising industrial designer Konstantin Grcic, design critic Alice Rawsthorn and designer and professor Saša J. Mächtig. Before the opening, the talk with Alice Rawsthorn, Justin McGuirk and Jan Boelen will be organized.

**29.**



DIALOGUE ON  
DRAWING AS A  
COGNITIVE TOOL  
ON 27 28 29 OCTOBER 2014  
AT PUNE, CHINMAYA VIBHUTI



SADHANA VILLAGE, 1, PRIYANKIT, LOKMANYA COLONY, PAUD ROAD, PUNE-411038.  
SADHANA ENGLISH SCHOOL, AT KULE, TALUKA MULSHI, DIST. PUNE,  
MAHARASHTRA.  
E-MAIL:- SADHANAVILLAGESCHOOL@GMAIL.COM

**30.**

**2014**  
**12<sup>th</sup> ISE HWWE Conference**  
Humanizing Work and Work Environment  Indian Society of Ergonomics  
**International Ergonomics Conference**  
December 3-5, 2014  
Pre Conference workshop: December 1-2, 2014  
**Indian Institute of Technology Guwahati**

**31.**



**EUROPEAN INNOVATION WORKSHOPS  
IN INCLUSIVE DESIGN**



**European Innovation Workshops in  
Inclusive Design: Oslo 16-17 October**

What is missing from many design or development processes? What can make you more competitive and creative? How can you better understand what your clients need?

Find the answers at a two-day Executive Education event in Inclusive Design. Learn from international experts such as Marco Steinberg, Anna Kirah, Dan Formosa and Rama Gheerawo who will show how inclusive design can be a tool for innovation at both operational and strategic levels.

Through inspiring lectures and method-based workshops, you will develop your personal expertise, and expand your professional and international network.

This event is open to designers, architects, urban planners, educators, marketers or business people wanting to create better products, services and environments.

The event is part of the Oslo Innovation Week.

Practical information:

The Norwegian Centre for Design and Architecture, Oslo, Norway, 16-17 October 2014

[Read more and sign up for the event](#)

## **JOB OPENINGS:**

1.

Elephant Design is looking for a Graphic Designer (Experience: 2-5 yrs) to be a part of their creative team in Gurgaon office. Candidate will be expected to work across various graphic design domains like corporate branding and communication, packaging design, print campaigns, event branding, retail and environment graphics etc.

Interested candidates can send their resume + portfolio link at [tanu.sinha@gmail.com](mailto:tanu.sinha@gmail.com).

2.

Fiserv India is looking for User Experience Architect to join their "User Experience Center of Excellence" (UXCoE) at Pune location.

send your resume with a link to your online portfolio to [kunal.pimplikar@fiserv.com](mailto:kunal.pimplikar@fiserv.com)

**Position-** User Experience Architect

**Industry Experience:** 7 to 10 years

An UX Architect will be required to perform a strategic role along with occasional project specific roles.

**Responsibilities:**

**Strategic-**

- Work with product owners to define the UX strategy and roadmap for individual business unit.

- Work towards developing capabilities within the UXCoE

- Oversee various engagements within UXCoE

**Project Specific-**

- Work with Business analysts, product management, software developers to produce a world class user experience for Fiserv products.

- Translate high level business requirements into tangible user interface design proposals that integrate the latest standards in interaction design and trends in visual design

- Create low-fidelity and high-fidelity task flow mockups and prototypes while integrating feedback from the product teams and our end-users

- Influence and educate the product teams in user-centered design principles and development processes

- Help define standards and best practices for consistent user experiences across Fiserv products

**\*Skills:**

- Formal education in Human computer interaction design, Industrial design, Communication design from reputed design institutes like IDC, NID or similar

- Strong conceptual skills and demonstrated ability to rapidly prototype and design

- Must demonstrate strong interaction design skills and have a solid

## *Inclusive Culture*

**understanding of usability principles and user centered design process**

- Experience with working on various mobile platforms ( iOS, Andriod, Windows Phone 7, etc) will be an added advantage
- Good understanding of user interface technologies ( HTML/CSS, Silverlight, Flex,etc)
- Ability to work independently and prioritize and manage work to meet project timelines
- Must have an eye for detail and be able to quickly put ideas into a tangible form
- Has internalized a rigorous design process and is able to tailor it to the needs of different types of projects
- Must have a good understanding of visual design and hands on visual design skills is a plus
- Must have extensive experience working closely with development teams on implementation of designs

**\*About Fiserv Inc\*.**

**Fiserv, Inc. (NASDAQ: FISV) is the leading global provider of information management and electronic commerce systems for the financial services industry, driving innovation that transforms experiences for financial institutions and their customers. Fiserv is ranked No. 1 on the FinTech 100 survey of top technology partners to the financial services industry. Fiserv drives innovation in solutions for Payments, Processing Services, Risk & Compliance, Customer & Channel Management, and Insights & Optimization. Fiserv is trusted by more than 16,000 clients worldwide including banks, credit unions and thrifts, mortgage lenders and leasing companies, brokerage and investment firms, and other business clients. For more information, visit [www.fiserv.com](http://www.fiserv.com)**

**\*About Fiserv India**

**\*Fiserv India Pvt Ltd. is one of the fastest growing IT Services firm in India, specializing in the BFSI domain across technology platforms. It is a 100% owned subsidiary of Fiserv Inc. Fiserv India aims to become the preferred partner for offshore services (IT, QA, BPO and Infrastructure) for the financial services industry globally. Fiserv India is ISO 2700:2005, PCI DSS compliant and has been assessed against CMMI Level 5 V1.2 in November 2009. For more information, visit [www.fiserv.co.in](http://www.fiserv.co.in)**

**3.**

- Looking for Product Designers with experience in designing consumer electronics/products.
- Ability to come up with a creative enclosure design for both sheet metal as well as plastic for a computing device we have developed.
- Majority of the work involved is tweaking an existing design to make it more aesthetically pleasing and also provide alternate solutions for mechanical components such as latches and hinges.
- expertise in softwares such as Solidworks, ProE and other CAD/CAM related software.

## *Inclusive Culture*

- The design should be done keeping manufacturability in mind.
- Freelancers based out of Bangalore would be preferred so that an in person meeting can be scheduled to have a look at the product prototypes to take this forward
- Should be able to provide a committed timeframe in which the project can be completed.

Any interested freelancers can send their profiles and portfolio of work done to [nachiketh@chipster.in](mailto:nachiketh@chipster.in)

4.

Aricent has openings for UX Designer and Interaction Designer between 2 - 4 years of experience. You must be good in understanding and providing solutions for complex systems.

**About Aricent**

Aricent develops software and provides technology services to application, infrastructure, and service providers with operations in 19 countries worldwide. The company with more than 800 customers, and employs more than 10,000 consultants, designers, and engineers at 36 locations worldwide. The company licenses its own software products for use in telecommunications design, manufacturing, and service with 40+ years' design experience through frog, including products for Apple, Disney, GE, HP, Sony, and many other Fortune 500 brands.

Interested candidates, please share your updated resume and portfolio at [sunir.mehta@aricent.com](mailto:sunir.mehta@aricent.com).

5.

TI Cycles of India is looking Design consultants and Freelance Designers to partner with for Retail Design and Product Graphics. Following would be the kind of work involved;

1. Retail Design: Help in creating Retail layout based on the Retail Brand guideline/format for new stores.
2. Product Graphics: Creating Product Surface Graphics to enhance the product appearance working within Brand framework.

The work would be on project basis, remote operation from would not be a constraint. Interested people may write to me with their profiles.

[sushant\\_jena@yahoo.com](mailto:sushant_jena@yahoo.com)

6.

UX designers to join Persistent's 150+ strong design team, Persistent Interactive, at Pune, Bangalore, Hyderabad, Santa Clara (California) and Columbus (Ohio). About 5-10 years of hands-on experience will be good enough (all of us are hands-on). I am sure JD is not required by experienced designers (who takes JDs seriously anyway?). But we would certainly like to see your portfolio.

## *Inclusive Culture*

Persistent is one of those technology companies where design is a part of the core strategy for organization's growth. Here design and design thinking are seen as drivers that differentiate the way projects are delivered.

Most of our clients are in the US... so ample opportunities to travel and work with Silicon Valley startups as well as large organizations.

Reshma - [reshma\\_deshpande@persistent.co.in](mailto:reshma_deshpande@persistent.co.in))

7.

HFI has been in the business of transforming lives through UX since 1981. Now we're looking for individuals like yourself who share a strong passion of impacting the world through richer experiences.

We are looking for candidates with energy to work on fast paced and diverse projects across the globe from post-colonial Pondicherry to the depths of Johannesburg.

Please reach out to us, If you are interested, up to the challenge and if you are a User Experience Professional who thinks they can perform a combination of the following roles:

A Researcher who has a unique ability to connect with end users and understand their needs

A Designer with the ability to create design solutions that are efficient, easy to use, build trust, are persuasive and motivate people.

An Analyst with a unique ability to derive insights and communicate findings.

We are looking for people with 3+ years of relevant experience. A formal education in HCI / Interaction Design or advanced certification in User Experience (e.g. CUA and CXA) is a plus.

We have vacancies in 2 locations, Mumbai / Pondicherry. The job involves frequent travel and may require the person to be onsite for 1-2 years.

If interested please write to us at [deepika.s@humanfactors.com](mailto:deepika.s@humanfactors.com).

8.

Keyur Sorathia, faculty member at department of Design (DoD) IIT Guwahati. I am looking for 2 design researchers and 2 technology researchers at my lab, Embedded Interaction Lab, on a Nokia sponsored project. The theme of the project is "generation of invention reports for future of mobile communication". The project gives immense opportunity work on new and fascinating areas of novel mobile interfaces, gestures, wearable computing and internet of things. The aim of the project is to learn future trends, analyze them and build on new concepts on above themes.

Interested candidates are requested to send their resumes to [keyur@iitg.ernet.in](mailto:keyur@iitg.ernet.in) or [keyurbsorathia@gmail.com](mailto:keyurbsorathia@gmail.com)

9.

Disney Interactive is looking for Senior UI Artists (UI Designers). The job is based in Mumbai. Please follow the link below to see job details and apply if you are interested.

<https://xjobs.brassring.com/tgwebhost/jobdetails.aspx?partnerid=25348&siteid=5039&jobid=210169>

**10.**

One of India's top 5 footwear companies is looking for a footwear designer for their studio. I am posting here on behalf of the management.

The designer would be responsible for creating Shoes and Sandals design.

The requirements are

Footwear designer/Industrial designer with an impressive portfolio and 3 - 5 years of experience.

- Creative and imaginative
- Excellent sense of style, trends, colours, form and ergonomics.
- Knowledge of molding processes and considerations.
- Strong Conceptualisation, visualisation and design communication Skills backed by free hand design sketching, Adobe Photoshop/Sketchbook Pro/Corel Painter/Gimp, Corel Draw/Adobe illustrator.
- Expertise in Rhinoceros/Solidworks/Catia/Autodesk Inventor  
Strong understanding of processes, materials and production mechanism
- Able to understand practical aspects and fine tune design processes to suit large volume batch productions
- Strong market research skills and ability to comprehend preferences of a wide consumer spectrum.

The applicants can send the resume to [rainbowlab9@gmail.com](mailto:rainbowlab9@gmail.com)

**11.**

Currently we have an opening for the below mentioned Position

1. Visual Designer
2. Information Architect (UX Designer)

Experience – 2-4 years

Job Location: Bangalore

Company Website: [www.echidnainc.com](http://www.echidnainc.com)

Interested candidates are requested to Send your Updated profile along with the Portfolio Samples to [shilpa.b@echidnainc.com](mailto:shilpa.b@echidnainc.com)

Desired Candidate Profile for Visual Designer Position:

- High-level proficiency with Adobe Creative Suite, including Photoshop, Illustrator, InDesign, and Acrobat as well as other major production and design software.
- Ability to design for web, mobile and tablet; Practical experience and knowledge of designing across multiple device types.
- High-level communication skills, including verbal proficiency in English.
- Who enjoys being part of a team, sharing in the collaborative process and leading in the design process equally.
- Team player with the ability to creatively manage multiple projects in a fast-paced in-house design environment.
- Ability to develop visually compelling marketing and advertising pieces.
- A deep understanding of visual balance, harmony, color theory and unity

## *Inclusive Culture*

- **Creative Writing skills.**

### **Desired Candidate Profile for Information Architect Position:**

- **Bachelors degree or equivalent in the Interactive Design / Information Architecture arena plus 2-5 years of experience as an Interactive Prototyper / Information Architect.**
- **Capable of wire framing experiences across devices and platforms.**

### **Other Knowledge, Skills and Abilities**

#### **Organization and multitasking skills a must.**

- **Excellent interpersonal, written and oral communication skills.**
- **Ability to work with an international team.**
- **Highly proficient in Microsoft Visio and other types of interactive applications.**
- **Excellent knowledge of Microsoft Office Suite and Adobe Products.**
- **Knowledge of current Advertising, Graphic, Web Design and Ecommerce industry trends.**
- **Excellent communication skills.**
- **Strong attention to detail**
- **Highly proficient in MAC and PC environment**

**"Choose a job you love, and you will never have to work a day in your life." - Confucius**

**12.**

**Pearl Academy Mumbai is looking for two senior positions detailed below**

**1. Head School of Design – This will have the sub schools of Interior architecture, Product and Jewellery**

**2. Head School of Communication, Media and Films**

**We are looking at progressive academicians and industry professionals who can give leadership and vision to each of these schools. The expected compensation is aligned to the best in this sector in India.**

**1. TITLE: HEAD – School of Design, This will have the sub schools of Interior architecture, Product and Jewellery**

**2. TITLE: HEAD – School of Communication, Media and Films**

#### **JOB DESCRIPTION**

**1. TITLE: HEAD – School of Design, This will have the sub schools of Interior architecture, Product and Jewellery**

**Reporting to CEO**

**2. TITLE: HEAD – School of Communication, Media and Films**

**Reporting to: CEO**

#### **GENERAL SUMMARY**

**This positions are responsible for providing academic and business leadership to the above named Schools of the academy. These position will provide academic excellence and overall direction to the respective schools. This role will be responsible for managing the academic resources, the quality of the product, operational efficiencies and profitable results of the respective schools.**

## *Inclusive Culture*

This role will report to the CEO of the academy. This role will have P&L responsibility for every aspect of the school. The position requires vision, discipline, innovative thinking and superb leadership skills.

### **KEY DUTIES AND RESPONSIBILITIES**

1. Develops and implements strategic and operational plans for the respective School of the academy.
2. Promotes and supports multi disciplinary teams (marketing & academic) for the design and roll-out of new programs. Ensure compliance with all regulatory and statutory regulations.
3. Works with faculty and staff to foster a student-centered learning environment.
4. Works closely with ADO and AQS teams to ensure maintenance of academic systems, process, quality and standards.
5. Designs and implements the product portfolio in the School based on market intelligence, the optimal delivery approach (campus-based/hybrid / on-line) and differentiates it from similar product in the market place.
6. Focuses on continuous quality improvement in academics and every other functional area.
7. Fosters partnerships with the higher education community, and professional organizations.
8. Partners with HR team to recruit, retain and develop faculty.
9. Manages the P&L of the School to ensure profitable operations and sustainable growth.
10. Implements adequate measures (scorecard) to meet the School KPIs (Financial Performance, Faculty Utilization, TQ- MQ scores, NPS & Employability standards pertaining to faculty & students of the school) to grow its assets and to maintain an effective system of budgeting control.
11. Monitors the dynamics of the market to enable us to maintain an innovative advantage of products, content and delivery.
12. Works closely with Sales & Marketing team for a comprehensive understanding of the market segments and customers, the development of competitive advantage and helping the sales & marketing team develop effective marketing and sales strategy and campaigns.
13. Align and engage with industry to match industry expectation with student outcomes and curriculum.
14. Align with the Laureate Network to position the School with competitive differentiation and innovative products.
15. Position the school as intellectual/thought leader in its domain through relevant research outputs, academic and industry engagement and events.

### **OTHER DUTIES AND RESPONSIBILITIES**

The incumbent will be expected to perform other duties and responsibilities which management may deem necessary, from time to time.

**REPORTS TO:** CEO of the Academy

**POSITIONS SUPERVISED:** Staff of The respective School of the academy

**PROBLEM SOLVING&COLLABORATION**

## *Inclusive Culture*

1. This position is responsible for resolving any issues related to the School's management and business performance processes.
2. The incumbent has wide latitude in resolving problems and issues. They work with management, functional leaders, external resources, consultants, and all levels of the organization to resolve problems.
3. The incumbent must typically determine the selection of short-term tactical and long-term strategic projects, project timeframe, project deliverables, and the general operation of these functions.
4. Addresses problems that impact the School.
5. Works effectively with employees at various organizational levels
6. Demonstrates ability to work with diverse workforce, ethnic groups, cultures and associated viewpoints leading to appropriate problem resolution and decision-making.
7. The position will work collaboratively with the campus directors in effective functioning specially in the areas of – new products, faculty recruitment and appraisal.

### **TECHNICAL, MANAGERIAL and PEOPLE SKILLS REQUIRED**

1. To perform this job successfully an individual must be able to deliver both quality products and successful business results. This is only possible with close management of the business, innovation, focus on the student experience, student outcomes, and Network cross collaboration and sharing of best practices.
2. Excellent planning and execution skills allied with well-developed analytical and problem solving skills.
3. The ability to build positive relationships with country, regional and Laureate Network representatives.
4. In-depth understanding of Laureate's DNA and modeling these values and attributes daily.
5. A team player, mature with initiative
6. Self-confident, ambition and energy.
7. Effective relationship building skills, allied with the ability to listen.

### **BUSINESS COMPETENCIES**

1. Must have advanced interpersonal and communication skills.
2. Must have strong qualitative and analytical skills and have the ability to perform statistical calculations and evaluate results.
3. Able to design and manage projects, resources, stakeholders, participants and deadlines.
4. Able to provide leadership, coaching and mentoring to the members of the school.
5. Able to manage a budget, control costs, plan and schedule around cost concerns for the School
6. Able to manage multiple segments and functional areas of a subsidiary or business unit.
7. Able to direct long-range planning and the development of programs to maximize organizational resources.
8. Must have the ability to work in a fast-paced environment.

### **EDUCATION & EXPERIENCE**

## *Inclusive Culture*

**Minimum requirement is a relevant Master's Degree with 15+years of experience in a senior academic/business role. Exposed to best-in-class business practices, strong financial acumen, and knowledge of corporate governance. PhD a plus.**

- 2. Knowledge of the regulatory environment in the Education sector in the country**
- 3. Ability to drive forward innovation and change in an organization**
- 4. Proven track record of successful business results.**
- 5. A market focused and analytical approach to operations of the Fashion & Textile School**
- 6. A track record of personal excellence in leadership and management**

### **LEADERSHIP COMPETENCIES**

- 1. Analytical**
- 2. Innovative**
- 3. Inquisitive**
- 4. Passion**
- 5. Team Oriented**
- 6. International**
- 7. Influential**
- 8. Entrepreneurial**
- 9. Over Achiever**
- 10. Flexible**
- 11. Customer focused**
- 12. Organizational savvy**
- 13. Market aware**

**This job description may be revised at any time.**

**Neither the performance of the essential duties and responsibilities in this job description shall create an obligation or expectation by either party that the Associate will continue employment with the Company, nor willing to obligate the Associate to continue such employment. The employment relationship between the Company and its Associates is, and shall remain, at will.**

**Applicants may communicate directly with Pearl Academy, Mumbai or at the Head Office at New Delhi by post at this address here or call for more information.**

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