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# DESIGN FOR ALL



**Design for All: Place-People-Purpose Relevance**

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Indian Institute of Technology Kharagpur | India

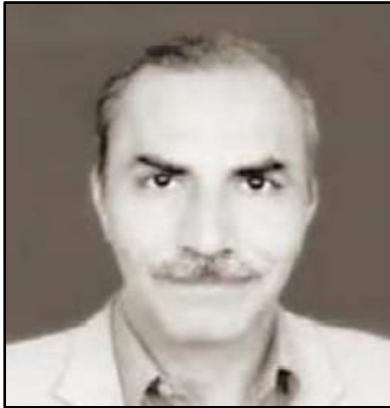


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## Chairman's Message



***Sunil Bhatia PhD***

Phenomena of warning are everywhere that is around and within us but we should have knowledge to understand its consequences and act accordingly to safe guard our interest. Nature has its own warning mechanism but we should have knowledge to understand what that means for. Some warnings prove initially false because of our ignorance but as we acquire advance knowledge it astonishes and proves significant for our progress. If we have failed in understanding its impact and result is either individual's loss or heavy casualties for masses that could be averted because of the havoc if we would have analyzed the signals of warning reflecting on us. Long back we would have become modern man if he succeeded in proper analyzing the warnings in past. New warnings are surfacing with the developments and it has inbuilt character with the advancement of technologies.

Man knows the art of living with warnings for achieving longevity but side by side he works in minimizing as well avoiding their harmful effects. The more he

works in this direction more he finds himself in web of warnings. By living alone was biologically impossible and to meet the psychological needs he was living in company of opposite sex and it was difficult for achieving longevity and fear of death was warning and hovering that forced them to live in community so gradually man turned to social animal but to live peacefully among themselves he devised social manmade warning systems. These warnings have come into the existence due to advancement of technologies and developed social behaviors. We adopt the new changing environments and developed skill of living with warnings and gradually it turns to habits, social norms and later on disciplines.

In primitive eras shelters were either caves or natural habitats and there was no manmade house and he was wanderer and prime assets possession was human lives and animals for food. His requirements were limited to survival and their knowledge was confined with these activities those could extinct them so they were concerned while observing associated warnings those were significant for survival. They observed sharp edge stones could bleed and might prove reason of killing, they warned the fellow person to avoid any hit with stones but that made them to realize it could kill the animals. They designed stone tools for killing animals and it was beginning of era of Stone Age. Even ancient people found moon comes under dark patches during certain days and they were in ignorance that created fear among them and devised many different mythological stories for subsiding as well justifying their fear by narrating it was the result of war between devil and God and we should pray for God who was engaged in fighting for our protection. This warning was without any foundation and as science developed they found it is moon or solar eclipse when planets rotate and move in circle comes in front of

other planet and covers partially falling light leaves the shadow of dark on other planet. There was no need for fear from this phenomenon.

As human progressed to agriculture and living in house, the warnings systems were no more like primitive times but these also advanced. We as modern people are living more a less in disciplined lives and associated warnings are completely different from primitive as well ancient people. Our journey from discovery of cave to skyscrapers was possible because of understanding of warnings for better design shelters. The moment we sense or warning from the authority for move to safer place we act accordingly to safe guard our assets. Prof Stephen Hawking is warning with his theory that habitants of other planets having advanced knowledge are visible via Unidentified flying Objects (UFO) in reality will conquer earth planet in near future and we should equip to match their advance knowledge otherwise earth planet will be in danger. We have umbrella to counter rain, by closing the doors and windows we can control air power, with the knowledge of electricity we can maintain the temperature of the house. These developments were possible because we understood what is good for us and how to counter that is harmful. Certain warnings are losing ground because of our advancement and new types of warnings are replacing the old ones. To live accordingly our habits are change and adapting new.

Habit dies hard and I am victim of habit of running in my formal dress wearing leather shoes where ever I get the opportunity to cover short distances while out of the house and for long distances I prefer public transport. I do not mind running with my leather shoe that is part of my formal dress and I am aware that sport shoes are large number of eyelets and long lace to match the pressure of running and it should not untie where normal leather shoes are

small lace with less number of eyelets and chances of untying of lace is high in running position and person may trip because of lose lace. One day I was running as usual wearing formal dress and lace of my shoe was untied and a passer informed 'your lace is untied'. I immediately stopped and properly tied the lace for avoiding any eventuality. While running I observed my disciplined mind does not allow me to cross the red light traffic signal but noticed special vehicles like ambulance and fire brigades are designed for emergency services and cross without caring the red light with peculiar sound . I found the common denominator factor in these incidences was warning. Design of warning played great role in progress of men by avoiding those can shorten their lives. Warning is economical but reliability is uncertain.

Certain warnings are designed with strong message and depicting final outcomes as we show in danger sign with skull crossing two bones wherever high voltage electrical transmission . Sometime it displays mild message and cautions ' Don't Honk Hospital/school' is in close vicinity or 'cigarette smoking is injurious to health' or in restaurant spill water area with 'wet area' or warning for driver 'narrow lane ahead' or 'speed breaker ahead' or to control the epidemic by advisory. Personal property has warning sign 'no thoroughfare'. By reminding ethical and moral values we are spreading the warnings in general for avoiding any conflict.

Nature has inbuilt warnings. When our body surfaces certain symptoms it is warning of knocking of some major illness. Medical practitioner uses the warning signals as symptoms for patients and decides the priority of the treatment. Our defense to fight those external forces which can harm are mainly controlled by reflexive system where role of brain is minimal as well by direction from brain that has its own functioning and mechanism to set the priority and works according to intensity of warning for saving our lives. Living



beings have sense to understand the changes in earth as well in environments that warning signals made them to look for safe places from earthquake as well natural calamities. In early stage of human development men had observed the changes in nature aftermath huge disaster occurred and as it again resurfaced they flashed the warning. A boatman learnt the art of forecasting in the form of warning by observing sky as well wind and current of river for safe journey. A farmer also did the same for optimizing his yield.

Ancient people were living under the influence of black magic and to keep the bad feelings effects at bay and entertain the good feelings they hang the old shoe or devil mask at the entrance was the warnings to the visitors 'enter with good feelings'. Anger, rage in human behavior are one kind of warning for invitation of major accidents and our messengers of god or saints or preacher are warnings against the consequences of these negative forces. Even they used variation of vocal cord sound for warning and later it helped in designing language. They might have used the vibration of bushes to warn and instill fear in attacking wild animals to run away otherwise they were likely to be killed. Sometime they stroked log at the surface for creating sound that alerts the animals to look for safer place. As they attempt for safety it proved trap for killing. Later on beating the drums confused the minds of wild animals and it proved prey for them. Bonfires are another kind of warnings symbol. They used smokes as warnings and in modern time fire sensors detect the smokes and send the warning signals for averting major fire. As society progresses certain warnings not to infringe the privacy of others shaped as moral laws. Forced entry in to someone house was declared unlawful acts. Certain dress codes warn others about the social status and demand certain protocols. A king or priest wears special dress that represents their status. Wearing a red

vermillion on forehead by woman in India is sign of married woman and it demands certain behavior from others around. Similarly in west wearing ring in specific finger was sign of marriage and it was warning for others to behave properly.

In modern life everywhere warning is visible and surrounds us and because of our disciplined lives we do not feel taxed and turned part of our lifestyle. It is the beauty of our minds which interpret properly and avoid possible eventualities which can prove fatal. Sometime it is hidden and majority of the times it provides clear message. Cities are designed with specific height and overflowing river crosses the flood level that can submerge the city is warning to move the safer places. Similarly we have advanced instruments which can predict the earthquake or tsunami or cyclones well in advance and we can save many lives. Pollution or someone close to you smoking cigarette is going to harm the people. Quality of water or air affects our health and to control its damaging affects we have designed water and air purifiers. Water purifiers has sensor that flashes warning of impurities. Crime scene is protected by rope that has warning not to cross and not to attempt to destroy evidences. Barricade is warning and open terrace has parapet that warns. Panic button in lift is used by users if in trouble as warning. Pressure cooker has whistle that warns users about status of cooking. Handrail in staircase works as warning and not using may invite trouble. Exit sign is warning but sorry to say that there is no universal graphic symbol for it and generally written in local languages. Use of CCTV camera as surveillance is warning to others that it is recording actions. Petrol tank has reserve indicator that warns the user vehicle can travel limited distance with this reserve fuel. Pipes are used extensively for supply and it has different international color coding that warns others do not disturb others color pipes. Electric wiring has colored wires to avoid accidents is kind

of warning. Citizens use certain telephone numbers for emergency for help as distress call as warning for agencies.

Packaging industries uses warning to handlers for transportation by Handle with care or handle Glass or upside down or highly inflammable or keep airtight or store in dark or keep below freezing point or transport in refrigeration van with maintaining specific temperature. Customers are advised the keep the medicines tight capped or keep in dark place otherwise light will triggers some chemical reactions and it may harm.

A naughty child is warned by mother who shows her widening eyes to behave properly. In rare case mother uses the sign of slap for warning. A class teacher is to maintain the decorum of the class allows the pupil who raises warning signal by raising one finger for relieving from natural call. 'Warning leads to discipline.' Even ring master uses warning of whip for trained animals for displaying skills in circus. If a driver does some silly driving mistakes another one by blowing horn warn the person for correct his course of action. Policemen use baton for warning or to control the violent mob they used tear gas or plastic pellets.

A beacon is an intentionally conspicuous device designed to attract attention to a specific location is used as warning and it helps guide navigators to their destinations. Vehicular beacons are rotating or flashing lights affixed to the top of a vehicle to attract the attention of surrounding vehicles and pedestrians. Emergency services vehicles are privileged with special light atop roof for warning others for proving free passages.

Prof Mainak Ghosh enthusiasm as Guest Editor is clearly reflected in this issue and he did his job with passion and innovation and left no stone unturned to

make this special issue at par with international issue. His professionalism and meticulous detailing made this issue more special. This is great honor for us that first Indian Institute of Technology established by our first Prime Minister Pandit Jawahar Lal Nehru has contributed a great role for progress of nation and we are associated in this issue.

Happy New Year 2017 and Marry Christmas.

With regards

Dr. Sunil Bhatia

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## Editorial Foreword



**Mainak Ghosh**  
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Design is all around and design is supposed to be for all. In today's world we live in a designed environment. The houses we live in, the offices where we work, the places where we hang out and go for recreation, the places which cater to our various needs and service our day to day living are designed and built by us. And not only the exo-skeleton of the building but its artifacts, furniture, services, fixtures, products, machineries, everything has been designed by someone and manufactured. Thus from part of whole, in small bits and pieces we use and perceive places which are essentially designed by human beings. Now the important question arises since design is all around, is the design meant for all.

Design is supposed to fulfil a particular requirement for which a design is being called for, hence it primarily focuses on users' needs. However apart from fulfilling its primary target of fulfilling needs of specific groups of users, a mature and sensible design should be sensitive towards its holistic nature and approachability by all. Many a times it is observed that though a design

approach remains successful for a particular set of users, it fails thoroughly for others. This is an inherent design discrimination hidden in the process and application of design. Design thinking needs to encompass a larger periphery and involve approach of design for all.

In natural world the concept of design for all, or rather one fit for all is rare and mostly unavailable. The survival of the fittest surmounts the idea of resources present for few who are fit and efficient. Thus in nature though the flora and fauna is abundant and dependent on each other in a close knit order, there is no provision for catering to individuals who are unfit or not equal in potential to others. Ecological balance is achieved through this process. However there exists a prudent harmony and growth of natural forms through this.

However with the dawn of human civilization, as has been with any form of human development with or against nature, there have been changes. And the very basis of human designs incorporated designed forms which were meant for one and more; be it society, rules and more tangible products, such as hunting tools, devices and machineries. With developments over time, in the realm of science and technology and then growth in subsequent complexity in designed forms, human beings realized the essentiality of design for all. Or in other words, designs that include all individuals irrespective of their differences, be it physical, mental, social, economic and many more. Each individual is different and unique, and the needs of each need to be honoured in a designed form. If not, it defies the very reason to design, which is intrinsic to human civilization. The first man who lighted the fire in the forest, to get some warmth or to cook his food, did not stop there as an individual act but shared the event to all. He has spread the goodies which he gained and then others made use of the same benefits. That's how human civilization grew over time and so did designed spaces and forms. No design is complete in essence

until and unless it is meant for others. And others could benefit from the same, making best use of it. We have moved one step forward to this, where we are looking at differences and disabilities of other individuals too and we are making provisions to include the ones with varied differences and disabilities. Perhaps that's what makes a design humane and sensitive. More importantly it supports the cause of human living and growth of human civilization.

I would be eager to see a day when, this horizon of inclusivity would also encompass our neighbouring forms of flora and fauna. Today we are at state of in time on planet earth, where this thought needs to be pursued more aggressively. Where each act of design by human beings, be it tangible or intangible forms, should be designed for all, including impacts on other creatures beyond humans in our surrounding environment.

In this particular issue the focus has been to look into spatial design in view of inclusive design or design for all. Environment around us holds various cues for us to function, perform activity, take decision and enjoy our day to day living effectively. The different facets of environmental design should consider inclusive design, taking into account different users, and people who interact or come across the designed forms. Human beings have progressed in various domains and each require design thinking and design decisions, these could no longer ignore principles of design for all. In this particular issue various authors have tried to put up different dimensions of universal design in context to environment and places around us.

**About Guest Editor:**

*Mainak Ghosh, Assistant Professor Department of Architecture & Regional Planning, Indian Institute of Technology Kharagpur , India will be the Guest Editor . his research interest revolves around perception studies, cognition and learning, and urban design. Presently he is working on various facets of visual perception factors cutting across various media in an urban domain. Precisely this delves in understanding concepts between spatial design, Human Computer Interface, Robotics, Information and instructional design, interaction design etc. which could be proliferated at an urban design and urban scape level. Completing his Bachelor in Architecture, he deep-dived into specialization of visual communication design in IIT Kanpur, Masters in Design. There after industrial experience as design consultant in one of the largest corporations in India. He has worked for various international and national clients working on the fronts of innovation, research & development and design interventions. He is well travelled with collaborations and connections in USA, Canada, UK, China and UAE. He is the founder of Undream Design, a holistic design hub. He has always been keen on academic pursuits, with publications of books, various journal papers and with attending conferences, mainly focusing on bridging the gap between communication design and space, architecture & urban forms. He has been invited speaker to Smart Cities and Countries Congress held in Paris last year. He has been visiting faculty in various institutions such as, Jadavpur University, School of Illumination Science, Engineering and Design, Kanpur University, Loreto College. Apart from his academic and professional expertise, as a hobby he is inclined towards artistic spurts. His art works has been exhibited in Berlin, Germany in 2012.*

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## **Designing for the underserved: My reflections**

***Uttaran Dutta***

The phrase “design for all” is simply fascinating, as it is inclusive as well as empowering. If we try to understand the word “all” (at least in the context of the human race), it talks about more than 7 billion people across the globe, including nearly 50% of whom are living under 2.50 USD per head per day (Titus and Chapple, 2013). So far, except for a few design interventions, the economically underserved populations were mostly forgotten and their everyday needs remained largely unaddressed in design research. Therefore, it is a need of this hour to pay more attention to the lives and the issues of the marginalized towards bringing about societal equity and justice. In the context of India, it is urgent more than ever, as approximately one third of the global poor live in this country (Olinto, Beegle, Sobrado and Uematsu, 2013).

This article briefly talks about some of my thoughts and experiences, which I learned over the years while doing field-research in various parts of rural India. Since 2010, I have conducted communication design research for several purposes, including designing interface for illiterate (and semiliterate) people, designing communication avenues to address various social issues, designing appropriate infrastructure (e.g., mini-hospital, library-cum-museum) using local materials/resources. All the aforementioned interventions were meant for rural and indigenous people, who reside in remote geographical locations such as coastal, Himalayan and jungle regions of India.

Every communication design intervention faces unique and specific challenges, which are shaped by (i) the contextual realities and barriers (e.g., local

resources and needs), (ii) the nature of the design problem(s) and (iii) the design approaches and frameworks. First, the contextual realities; I experienced several barriers while working with the underserved populations, including (i) literacy and linguistic barriers (i.e., many of the cultural participants didn't know mainstream Indian languages), (ii) attitudinal barriers and power differences (and overall skepticism to interact with a researcher who is an outsider and/or unknown at least initially), (iii) unavailability of previously researched/authentic data (i.e., as the populations are under-researched, I experienced a scarcity of authentic information about local people, their knowledge and practices).

In order to address the aforementioned design problems and barriers, I embraced a critical, participatory and ethnographic approach of conducting research. Such an approach was not only inclusive, but also bottom-up and dialogic in nature, which aimed at creating avenues for meaningful social change. To elaborate some facets of my approach, I will discuss four aspects of my design approach here; they are (i) participation at every stage of research, (ii) co-learning and co-creating, (iii) in-situ design practice, and (iv) exploring alternate possibilities of knowledge creation.

**Participation at every stage of research:** While participation is an important theoretical and methodological construct, it is crucial to ensure participation at every stage of a design intervention. In reality, many researches follow a few participatory practices, that too at the initial stages of interventions; later the researchers use the collected responses of participants to unilaterally design the solutions, and present them to the participants for their feedback. Such an approach is reductionist in nature, as the participants have to choose from the limited options presented to them. Instead of situating and/or conceptualizing

local people as passive recipients, it is necessary to include cultural participants in all the stages of research starting from data-gathering, ideation, option generation, finalizing the solutions, implementation to post-implementation and evaluation stages. Moreover, it is essential to include local community members in the design team and seek their active solicitations to ensure meaningful participation. I believe, it is important to understand (and create solutions for) local issues using local-centric/ community-centric lens, particularly when the power differences are high and the voices of the underserved are historically erased in the spaces of decision-making. In addition, participation at every stage also helps building and enhancing the trust; in the long-run, it ensures sustainability of designed solutions, as the participants assume their ownership in the entire design process.



Fig.01: Community level discussion session with villagers in Purulia

**Co-learning and co-creating:** As a privileged person, who is educated (sometime in premier institutes) and learned the principles of design, we often consider ourselves as experts when we solve design problems. The notion of expert is somewhat inappropriate (if not fatal) particularly when we design for communities, whose age-old cultural and material practices are under-researched and less-known. In other words, rapidly studied and prescribed form of design solutions might fall short to address issues of the marginalized in a culturally appropriate way. Therefore, it is important to conceptualize the relationship between community members and designers in a more humane way, where local knowledgeable people can take the central role (e.g., become our teachers), as they have experiential wisdom and thoughts in effectively handling local problem in the local way using local resources. Our educational knowledge and experiences can be shared (as equal participants) with the local people, where we will learn from each other at each stage of designing and implementing; thereby we could create a democratic level playing ground to co-generate designerly solutions. This is particularly helpful in underserved spaces, particularly where the deference effects (Bernard, 2006) are very high (i.e., people at the margins, who are often shy and polite, try to please us by saying the words which would not offend us, the researchers). Moreover, engaged research interactions with local participants help us to grow as a sensitive designer as we get the opportunity to learn alternative ontology and/or epistemologies of designing, which are usually not taught in a standard academic environment. For instance, in my work, I learned new aesthetic vocabularies and also noticed how local values and culture guide the design processes and final outcomes.



Fig.01: Co-learning session by master craftswoman, village of Purulia



Fig.02: Co-designing session organized in a Himalayan village

**In-situ design practice**: To design for communities reside in geographically isolated regions, particularly when we have little prior knowledge about the people and the places, in situ design practice is helpful. On one hand, such a practice, aid us gaining first-hand experiences of the locale, which is one of the



foundation stones for creating a meaningful design solution. On the other hand, in low-resource contexts like rural/indigenous India, we experience a variety of unforeseen barriers or challenges; addressing those unforeseen parameters is often effective if we design in-situ. For example, to design an interface in remote villages where telecommunication signals are weak (2G environment) and infrequent, and electric supply is severely irregular, it is important for a designer to learn how to optimize her/his outputs by considering real constraints, so that local people can use the solutions sustainably in their real lives. In addition, in-situ designing also facilitates participation at every stage of the research, as cultural participants look at and provide their feedback at every phase of development of a solution. As the local people feel welcome to discuss and debate in every stage of development, the end-users acquire more control over the research processes. Thereby, the deference effect reduced and more dialogue happens; consequently, the quality of the design solution enhanced and becomes meaningful for the local communities.



Fig.02: Villagers working on visual elements in an Indigenous library cum museum

**Exploring alternate possibilities of knowledge creation:** Historically, Eurocentric knowledge production, especially in the academic spaces, teaches us singular and/or reductionist way of understanding the reality. Such an approach essentially instructs us to read indigenous socio-cultural processes as inferior and pseudoscientific, and thereby encourages us to reject alternate knowledge and discourses situated in marginalized spaces. A sensitive designer needs to be careful about such misleading and erroneous understanding about underserved spaces and practices. We should not forget that rural/ indigenous people of India are sustaining their social, technological and cultural heritages for the last few thousand years. They are not only successful survivors, but also authentic sources of valuable knowledge and wisdom, which is the key to alternate designing, theorizing, and knowledge production. As an engaged researcher, we not only require learning the forgotten/unknown epistemologies, but also need to foreground them in order to create possibilities for future knowledge production where dominant and underserved discourse can dialogue and co-create newer languages of science, technology and design.

In this short article, I tried to briefly address some of the key approaches for designing solutions in underserved contexts (especially for geographically remote rural indigenous spaces). In this unequal world, where the disparities are rapidly increasing between haves and have-nots; the designers need to take proactive roles for co-creating avenues for meaningful social change to ensure equity and justice. The aforementioned four approaches are not an exhaustive list, rather a few discussion pointers, which might ignite future debates on 'design for social change in underserved contexts'.

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**Uttaran Dutta** is an assistant professor in the Hugh Downs School of Human Communication, Arizona State University, USA. He received a Ph.D. in communication studies from the Purdue University, USA and got a master degree in design studies from the Industrial Design Centre (IDC), Indian Institute of Technology (IIT)-Bombay, India. He has published several articles and chapters in academic journals and books, and presented in various international conferences.

*Uttaran Dutta studies creative ways to address development, health and social disparity issues. His research focuses on sustainable development and social change in marginalized communities, analyzing the importance of culture, communication, design and innovation in transforming the lives of people who are socially, politically and economically poor. In all his work, local participants are the key forces in identifying and developing cost-effective solutions using local resources. For example, he is developing computer application for illiterate people in rural India to access useful information for them, or collaborating to construct mini-hospital, library-cum-museum, protection wall in remote areas. Additionally, He researches the folk-culture and indigenous knowledge of the underserved to document and understand alternate ways of viewing the world.*



# Identifying parameters of Affective and Pleasurable Design of a Bus Stop with utilities in Urban Indian context - an Inclusive design approach

***Haimanti Banerji***

## **Abstract**

Affective and pleasurable design is not an alternative to usable design. A built environment which is usable and accessible will not necessarily be pleasurable. The authors have referred the “four pleasure” framework to get an insight into why people experience pleasure or the lack of it. It has been reasonably assumed that pleasurability is not simply a property of an environment but of an interaction between man and environment. Traditional human – factor approaches are very often concerned with physical aspects of the built environment like comfort and usability which are related to the physiological needs and anthropometrics of the users. This paper attempts to identify those attributes which are responsible for creating a public facility which would be able to render full satisfaction to all users in urban Indian context. The authors have chosen to design a bus stop along with toilets and other utilities to implement the principles of affective and pleasurable design.

## **1.0 Introduction**

Historically speaking, human beings have sought pleasure and have gained pleasure from various natural environments that rejuvenate the body and mind and also from various activities and hobbies that stretch the mental, physical and creative capabilities. Another source of pleasure had been the

built environment and various functional and decorative artefacts which human have sought to increase the quality of life.

## **2.0 Need and Scope of the present study**

Affective and pleasurable design is not an alternative to usable design. A built environment which is usable and accessible will not necessarily be pleasurable. Usability is a key component of affective design 'Satisfaction' has traditionally being defined as avoidance of physical and cognitive discomfort i.e. the environment must be designed such that the cognitive and physical demand placed on the users do not exceed the person's processing capacity. But ideally, this requires going beyond simply looking at the factors that influence how successful in terms of task completion – a user environment interaction would be. In the context of a space or a built environment there are certain benefits that people look for:

- Practical benefits are those that accrue from the outcomes of tasks for which the environment is used.
- Emotional benefits are those pertaining to how a space affects a person's mood. Performing in an environment may be exciting, peaceful, satisfying, confidence enhancing, or at the same time, threatening, annoying and stressful.
- Hedonic benefits are those pertaining to the sensory and aesthetic pleasure associated with the environments.

This paper attempts to identify those attributes which are responsible for creating a public facility which would be able to render full satisfaction to all users in urban Indian context. The authors have chosen to design a bus stop

along with toilets and other utilities referring to principles of affective and pleasurable design.

### **3.0 The four pleasure framework**

Pleasure is the condition of consciousness or sensation induced by the enjoyment or anticipation of what is felt or what is viewed as good or desirable; enjoyment, delight, gratification (Oxford English Dictionary). In the context of products, pleasure can be defined as the emotional, hedonic and practical benefits associated with products (Jordan, 1999). A useful way of classifying different types of pleasure has been identified by Canadian Anthropologist Lionel Tiger (Jordan, 2000). The framework models four conceptually distinct types of pleasure - physical, social, psychological and ideological (Tiger, 1992).

### **4.0 Built environment and pleasure**

Traditional human – factor approaches are very often concerned with physical aspects of the built environment which are related to the physiological needs and anthropometrics of the users. The authors have attempted to relate the “four pleasure” framework in the context of built environment to get an insight into why people experience pleasure or the lack of it in a particular environment. It has been reasonably assumed that pleasurable is not simply a property of an environment but of an interaction between man and environment.

- **Physio – pleasure:** This pleasure is derived from the sensory organs. They include pleasures connected with touch, taste and smell as well as feeling of sensual pleasure. In the context of built environment, thermal

comfort, good ergonomics, good ambient light and adequate noise level – all are responsible for generating physio – pleasure in an individual.

- **Socio – pleasure:** This refers to the enjoyment derived from relationship with others. In this particular case, this means relationship with the co – users of the said public place. This also includes a person’s relationship with society as a whole – issues such as status and image play a major role here. Association of a user with a well designed and sophisticated public place forms part of their social identity. A public place especially a bus stop can facilitate public interaction and generate a sense of satisfaction in many ways.
- **Psycho – pleasure:** Psycho – pleasure pertains to person’s cognitive and emotional reactions. In case of a built environment, this might include issues related to cognitive demands of being in the same and the emotional reactions engendered through experiencing the place. This primarily refers to the various physical and spatial stimuli that affect the attitude and behavior of people through the processes of sensation, perception, and cognition. It is a proven fact that in a public place, stress increases person’s responses to the environment (Danielsson, 2005). The physical environment can reduce or modify the environmental stressors to affect people's attitudes. A building or space should reflect a balance of human subconscious forces (Alexander, 1972). Along with the common environmental stressors (e.g., noise, climatic extremes) some define stress as the failure of preference. Cognitive stressors as prolonged uncertainty, lack of predictability and stimulus overload (De Young 1999) are included in the definition.

A person's sense of well-being influences productivity, creativity, and engagement (Heerwagen, 2006). Absence of crowding, proper layout (form and configuration), adequate level of stimulation (complexity and mystery), legibility, coherence, affordance and control are some of the spatial stimuli which must coexist to create positive and productive places: cognitive effectiveness, social support, emotional satisfaction, and physical comfort.

- **Ideo – pleasure:** This pertains to people's values. In the context of built environment, the aesthetics of the place or the design principle that convey some message are responsible for generating *ideo – pleasure*. A public place which is universally accessible or which is made of environment friendly materials are sources of this type of pleasure.

## **5.0 Description of the present study**

The paper duly acknowledges the fact that universal access to public utilities is the norm today, regardless of physical limitations, health status, sex, or sophistication of visitors. The design approach has considered the diversities in people's ways of using and experiencing similar public facilities. The authors have referred to various principles of Universal design which are more contextual in India like cultural appropriateness, affordable, aesthetically pleasant while designing the facilities. These are certain universal design ideologies that focus in Indianness and inclusivity as they relate to age, gender, disability, caste, class, religion, poverty and urban/semi - urban background.

### **5.1 Objective of the Present Study**

The research method includes field observation to assess the real context in which the prototype will be experienced. Also, in order to understand the links between a few formal attributes of the space designed and people's probable experiences and expected benefit the authors have relied upon computer simulations of environments (CSE) for a realistic simulation of the prototype. Of the various non empirical methods available, the expert appraisal method has been adopted for providing diagnostic and prescriptive analysis. Preparation of a property checklist has initiated and guided the design activities.

### **5.2 Methodology and Study findings**

The researchers have studied the nature of interrelationship between the built environment under study and human behavior retaining a broad and inherently multidisciplinary focus. In the process, many available relevant solutions at national and international level have been adequately referred to. Apart from physical comfort, responsiveness depends on the clarity and speed of feedback one receives when acting upon an environment. Following needs of people within any public space are derived out of the various forms of pleasure referred to in section 3.0 of this paper.

**Table 1 List of Responsivity needs of people within a Built Environment**

<b>Responsivity needs common to all but more intense for People with reduced physical and mental capabilities</b>	
Need for coherence in space	<ul style="list-style-type: none"> <li>▪ Creating neat &amp; organized appearance (Mehrabian and Russell, 1974)</li> <li>▪ Facilitating optimum level of physical stimuli like interpersonal distance, lighting, noise, temperature</li> <li>▪ Optimizing perception of spaciousness by introducing a human scale and controlling visual freedom</li> <li>▪ Encouraging multiple repetitive features to introduce an underlying rule or pattern (Alexander 1972), predictability and thematic continuity (Kaplan and Kaplan 1982).</li> <li>▪ Using distinctive landmarks located at decision nodes (Appleyard 1976; Evans 1980)</li> </ul>
Optimum level of arousal	<ul style="list-style-type: none"> <li>▪ Preventing an overload of stimulus to achieve a focused attention and prevent distraction</li> <li>▪ Facilitating situation awareness by auditory and visual information delivery system.</li> <li>▪ Providing interactive layouts and circulation that support information exchange and freedom of sight</li> </ul>
Control and Jurisdiction over space	<ul style="list-style-type: none"> <li>▪ Enhancing actual or symbolic ownership and scope for personal maneuvering of intimate space at will</li> <li>▪ Providing good surveillance through uninterrupted sightline</li> <li>▪ Delineating symbolic boundary within public zones</li> <li>▪ Subdividing spaces with vertical and horizontal expansiveness into smaller sub units (Newman 1972).</li> </ul>
Sensory arousal and mood elevation	<ul style="list-style-type: none"> <li>▪ Enhancing mood elevation through direct contact with nature.</li> <li>▪ Facilitating surrogate contact through external views, indoor landscaping, natural ventilation, and organic patterns in spatial layouts, furnishings, and carpeting. (Ulrich 1983)</li> <li>▪ Utilizing positively effects of minute architectural details like nature of building finish and colour.</li> <li>▪ Avoiding a set up which is too much institutionalized / high – tech since that creates a sense of powerlessness and lack of control amongst users.</li> <li>▪ Installing appropriate signage and visual displays to develop an overall sense of equity.</li> <li>▪ Fixing artifacts and symbols of cultural and group identity to instill a sense of uniqueness and belongingness</li> </ul>
Need for Privacy and concealment	<ul style="list-style-type: none"> <li>▪ Incorporating within layout the ability to regulate social interaction at will (Altman 1975) since people sometimes tend to avoid interaction and value this feeling of privacy.</li> <li>▪ Strengthening a definite spatial hierarchy which is considered as a central element influencing privacy. The aspect can be addressed successfully by provision of spaces ranging from places</li> </ul>

that provide solitude and intimacy to those that foster voluntary contact with the public. Arrangement of seating can directly affect social interaction potential (Sommer 1969).

- Providing physical or visual sense of enclosure by horizontal or vertical screening materials will introduce an intimate scale.

<b>Special responsivity needs for People with reduced physical and mental capabilities</b>	
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Development of self esteem	<ul style="list-style-type: none"> <li>▪ Inviting feeling of respect and approval from others by making people with reduced physical and mental capabilities able to perform with dignity the regular activities in the place.</li> <li>▪ Encouraging voluntary informal interaction and conversation with others through a common seating zone, an accessible utility zone is effective in countering stigma</li> </ul>
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The authors have conducted face – to – face interviews in several bus stops in Kolkata, a metropolitan city in eastern India in order to understand the user’s needs and aspirations. A place which encourages exchange of help and support (Heerwagen, 2006) or which generates a feeling of association or belongingness helps in creating a relaxed and tension free environment. Delineating symbolic boundary within public and semi public zones and subdividing spaces with vertical and horizontal expansiveness into smaller sub units (Newman, 1972) instill the feeling of territoriality.

A physical milieu which instills a feeling of not being vulnerable to accidents or pain or a layout which ensures protection from unwanted intrusion and which seems to be under control (Cohen et al, 1986, cited Evans and McCoy, 1998) is essential for psychological comfort. An environment should also be equipped with optimum level of sensory arousal (Evans and McCoy, 1998).

The proposed design features which were evaluated through the user perception survey primarily targeted on four aspects (i) design of seating zone (ii) ease of access to and from the vehicle, (iii) presence of utilities, (iv) availability of information. These solutions were derived from literature survey



and similar studies. The perception of physical, social and ideo - pleasure was measured using a five – point Likert (1932) scale wherever applicable, (1) measures the lowest perception and (5) implies highest.

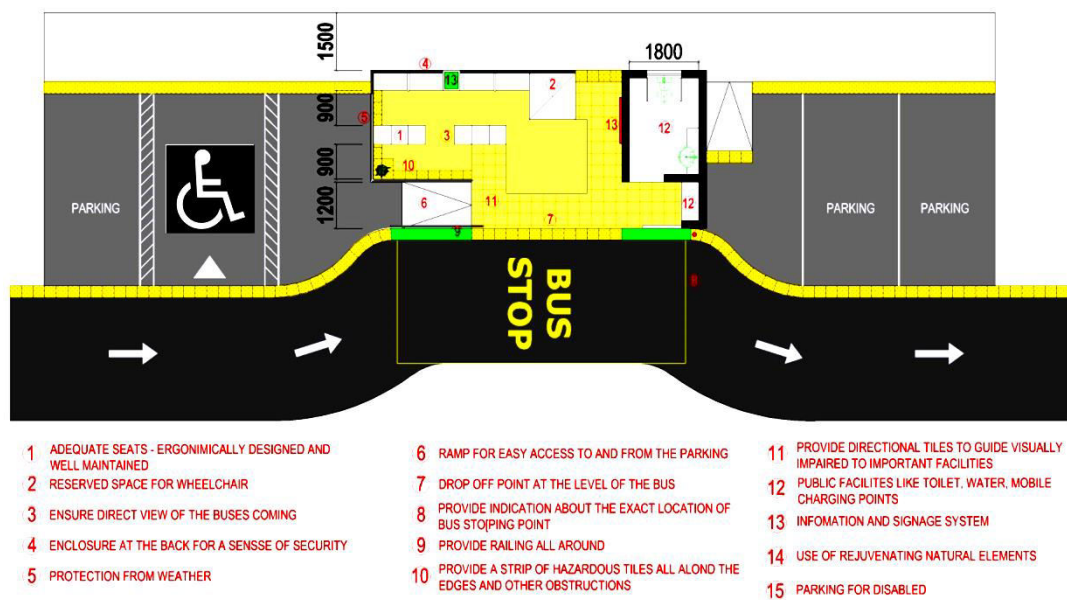
**Table 2A Proposed Design Solutions for the Bus Stop**

Design proposals	Type of Pleasure
To provide adequate seating considering the number of people waiting which is a function of <ul style="list-style-type: none"> <li>- frequency of bus services</li> <li>- number of buses plying in the route</li> <li>- locational importance of the stop</li> </ul>	Physio
To ensure application of ergonomics in seating design	Physio
To provide reserved space for wheelchair as per international standards and adequate passage for moving the wheelchair, well designed seating with hand support and back support for people with reduced abilities	Ideo Physio Socio
To locate the seats with a direct view of buses arriving	Psycho
To provide an enclosure at back with a view of the road in front	Psycho
To provide various options for seating: <ul style="list-style-type: none"> <li>- Seats in groups – to facilitate interaction</li> <li>- Single sitting or couple sitting arrangement – to create a sense of territoriality and belongingness</li> </ul>	Socio Psycho
To provide well maintained seats – good quality material (durable and environment friendly), sophisticated design - a work of art	Socio Ideo
To ensure protection from extremities of weather	Physio
For ease of access to and from the vehicle provide a ramp from the street for accessing the bus stop	Physio
To provide a drop of point which is at level with floor of the bus	Physio
To ensure stopping of the bus at a particular location to order chaos and confusion while boarding	Physio Psycho
To provide a railing all around except for the point of boarding to ensure a sense of separation and protection from the traffic	Psycho
To introduce a system of queuing for boarding the bus to avoid chaos – especially essential for people with reduced ability	Psycho
To provide following public facilities presented in descending order of preference as obtained from the primary survey <ul style="list-style-type: none"> <li>(i) Accessible and clean Toilets, (ii) Mobile phone charging points near the seating zone, (iii) Adequate lighting at night , (iv) Drinking water , (v) Refreshment kiosk , (vi) Light background music, (vii) Waste bins</li> </ul>	Physio Psycho Ideo
In order to create situation awareness and a sense of control following information in descending order of preference should be provided in stops: <ul style="list-style-type: none"> <li>- To provide information regarding bus timings</li> </ul>	

- To provide a help – line number to call in emergency
- To provide a “you are here” map indicating different types of facilities available in the locality like medicine shop, train station, stand for para transit, police station etc.
- To provide a route map of all the buses plying in the city, at least for the buses plying in that particular route.
- To provide a display where current news or weather forecast are being shown.
- To provide information like date, time, temperature

Psycho

The proposed prototype attempts to ensure a balance between concealment and freedom, being cared or protected and being allowed variety of choices and independence, contact and withdrawal, territoriality and free mixing, desired exchange of help and support and unwanted intrusion and the like. Linking socio - psychological consideration to the ambient environmental conditions the researchers has proposed the above – mentioned design features to create a restorative environment having a positive effect on human behavior.



**Fig.01:** Plan of the proposed bus stop



**Fig.02:** Computer simulated views of proposed bus stop

## 6.0 Conclusions

This paper attempts to demonstrate the fact that it is more important to understand people holistically and a pleasure based approach to human factors rely on building up a far richer understanding of people's needs and aspirations than do usability based approaches.

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# Commercial centres in Indian cities in the light of universal design

***Sanghamitra Sarkar***

## **1.0 Introduction**

**Commercial Centres** are primarily the centres of urban economic growth of a city. Earlier it was in the form of markets in the city. With the advent of Globalisation and development drive for image building, in recent times, the idea of markets have taken a backseat. The westernisation of development has transformed the market into a mall. Hence a novel building typology has replaced traditional markets and it has no similarity to the former. These have also transformed into centres of public place of the city. Hence the traditional behavioural patterns are undergoing severe adjustments in terms of walkability, usability, perception of public space, tolerance and viability.

This paper investigates whether design of the new shopping experience has anything to learn from traditional markets in light of the Universal design approach.

Trade and commerce evolved from a simple market place to a hub of commercial activities. These Commercial Centres have an array of functions such as shopping / retail, offices, hotels, entertainment etc. Shopping centres have become one of the most frequented places having quickly captured the imagination of the masses and have become dominant building typology being in almost all Indian cities.

**Indian cities** are all on the path of transformation. India has proposed that 100 cities will become smart cities. Major cities like Delhi, Kolkata etc. have taken a technology driven image building strategy in the path of urban development.

Massive projects have been taken up to redefine Commercial Centres of the city. But design of the same has not taken into account the Universal design aspect for public space design.

**Universal design** or inclusive design refers to broad-spectrum ideas meant to produce buildings, products and environments that are accessible to older people, people without disabilities, and people with disabilities. It is one of the major tools of design in the context of public buildings and spaces. The concept has many names and professionals connected to it, such as: Design for All, Inclusive Design, Participatory Design, Human Centered Design, Usability, Life Span Design, Independent Living etc.

This research aims at unravelling the influence of Universal design in the design of traditional commercial centres which would help in deriving a language for the design of upcoming commercial centres pertaining to the Indian context.

## **2.0 Description**

### **2.1 Commercial Centres in Indian cities**

Conventionally, commercial centres in Indian cities were essentially markets spread over an area. All the old city markets of India have primarily an axial spatial formation. During medieval times, markets in Southern India known as nagarams were urban spaces which helped in production and exchange of commodities in local, regional and international levels like the Vijaynagara Empire. One of the most celebrated examples is the marketplace in the the world heritage site of Hampi (Fig. 01). The built form exhibits colonnaded shopping streets arranged around a central plaza.





**Fig.01:** View of the ancient marketplace at Hampi ( Google Images)

Chandni Chowk, Delhi has a central spine which branches out to feeder streets which has commercial activities concentrated on the street edge. This focuses more on the ease of circulation commercial activity. Not only did this model provide ease of access for daily commercial activities; this promoted healthy interaction between buyers and the sellers. Streets form the essence of markets in all major cities of India e.g. Burra Bazaar is the heart of commercial life in Kolkata as is the M.G. Road in Bangalore. It translates in the same form in all different scales whether it is the main commercial areas or the quaint street corner which is the hub of most daily needs.



**Fig.02:** Chandni Chowk, New Delhi ( Google Images)

Shopping centres (also, shopping mall or shopping plaza) are the 20th-century version of bazaars and the offspring of industrialization and modern architecture. Shopping centres are comprised of groups of stores in a roofed or unroofed space. These centres also provide services such as restaurant, parking, recreation, hair dressing, etc. Variability in these services depends on size, neighbourhood area, and many other factors of shopping centres. (Asadi, 2009) The transition from an open interactive built character to a closed and confined box has been drastic. These have become urban places during festivals and other events.

## 2.2 Universal Design for commercial centres

Universal design is Universal in the global sense. Accessibility for all is an issue in every part of the world. Standards and legislations have been formulated to aid in better public space creation. The Seven Principles of Universal Design, developed by the Centre for Universal Design, North Carolina State University with a consortium of universal design researchers and practitioners from across the United States, are as follows:

- a) **Equitable Use:** Useful design for people with diverse abilities.
- b) **Flexibility in Use:** It accommodates a wide range of individual preferences and abilities.
- c) **Simple and Intuitive:** Use of the design is easy to understand.
- d) **Perceptible Information:** It communicates necessary information effectively to the user.
- e) **Tolerance for Error:** Minimizes hazards due to accidental actions of users.
- f) **Low Physical Effort:** Reduction of physical exertion of the user.
- g) **Size and Space for Approach and Use:** Appropriate size and space is provided for approach, reach, manipulation and use.

The Central Public Works Department of India on the other hand has laid down the following guidelines in regard to Barrier-free design for minimum access provisions for Commercial and Public Buildings. They are as follows:

- a) Accessible toilet facilities should be available.
- b) Seating for persons with disabilities to be accessible from main entrances and lobbies. Various seating/viewing choice to be provided for persons in wheelchairs throughout the main seating area.
- c) A minimum of 2 wheelchair spaces for seating capacity up to 100 seats.
- d) A minimum of 4 wheelchair spaces for seating capacity from over 100 to 400 seats.

### **3.0 Analysis**

The spatial formation of traditional markets has demonstrated guidelines for universal design for a long time. A qualitative analysis based on visual survey of three commercial centres would elaborate the discussion. Maniktala Market in Kolkata is one of the oldest markets in the city. Like shopping malls one can see that this is also a market under a single roof. The difference is that the market exhibits space making in the form of a sequence of streets accessible at various locations ensuring ease of access. It has a single floor system reducing necessity for stairs and



**Fig.03 & 04:** Shop formations in Maniktala bazaar ( Source: Google Images)

ramps to the minimum. It also caters to reduction in physical activity due to compact circulation pattern. The colonnaded arcade running all around the external edges of the market provide appropriate human scale for the approach and use. The spatial distribution is zoned for different activities which makes the place simple and easily perceptible for the users. In the current scenario legibility is achieved by means of landmarks such as a very popular flower shop, the location of the fish market, the small temple in the bend etc.



**Fig.05 & 06:** Street edge design at City Centre II, Rajarhat ( Source: Google Images)

In contrast, City Centre II, Rajarhat, Kolkata embodies the image of modern Kolkata as a smart city. The major differences is in the accessibility from a front plaza to a high plinth where all the shops are situated. The building edges do not encourage any active zones. This typology is manifested in large buildings



which makes it physically exertive. Even though flooring patterns and signage patterns are in a much better state than the traditional market model, there is always scope for improvement.



**Fig.07:** *Street pattern in City Centre I ( Source: Author)*

This calls for a middle path which forms a bridge between traditional and modern that can curtail drastic changes in behavioural patterns to make it comfortable and easier for the specially abled and elderly. In the design for City Centre I, located in Saltlake, the architect Charles Correa (1930-2015) had questioned the idea of mall as a single introverted box. The rigid box has been broken down to several blocks which are connected to each other by a pattern of streets. The streets exude the character of a traditional market imparting an easy perception of space. The pathways are like wide neighbourhood streets. Accessibility has been limited to the ground floor mostly only broken in certain locations by staircases along the pathways. Interestingly the staircase railing is designed in such a manner so that a person has relief if one is tired. 11 entrances were designed to provide a lot of options to approach the central plaza for the elderly and specially-abled. Landmarks like a popular 'Chai'-shop (tea shop – traditional street side cafe for social interaction) provide legibility to the design.

City Centre Saltlake provides an intuitive solution to the building typology of shopping malls providing immediate identity to Kolkata and brings individuality in the design of Commercial Centres for an intrinsic Indian city.

On one hand the traditional Indian commercial centre exhibits intrinsic qualities of Universal Design in its spatial formation whereas on the other hand there is a need for a sensitive approach to the design of the same in their current expression. The city also has an answer in City Centre, SaltLake as to what can be referred to as a middle path. Hence it could be observed that in Kolkata, that while the principles of universal design has been well incorporated in certain cases along with place identity, in certain others it is far from what is desirable.

#### **4.0 Conclusion**

The design for Indian Commercial centres need to be re-imagined to derive a language specifically for the Indian cities in light of Universal design. Drawing parallels from the both the traditional and modern Commercial centres of Kolkata will give us the desirable form responding to Universal design inherent of the tradition, culture and behavioural aspects of the city. In light of the above discussion some issues need to be addressed. Perception of space should be an integral part of Universal design. Reduction of grade separation and seamless transition between spaces should be ensured to reduce physical effort. Accessibility should be the primary concern for the universal design of public spaces. All design decisions should favour of the end user. Universal design is embedded in the design of traditional markets of the Indian cities. The spatial design and distribution of these markets can be of great influence to the shopping mall typology and can create a new definition for Indian commercial centres.

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*The above paper is an outcome of her Under Graduate Thesis Research work under the guidance of Dr. Sanjib Nag.*





# Residential settlements in colonial towns from inclusive design viewpoint: Case of Chandernagore

**Ruchira Das**

## **1.0 Introduction**

Urban Transformations refer to the evolutionary process of modification or adaptation in urban areas, due to the change in political, social and economic patterns.

The process of transformation in urban areas can be seen by ‘uncontrollable city area expansion’ due to population escalation & global economy and by ‘transformation of internal city structures’ due to modified social needs, economic developments and technical advancements (*Clerici, Mironowicz, 2009*).

Urban physical or spatial transformation is most evident in residential settlements, as privately owned properties can be converted into different building use typologies easily with the zeal of owners, based on changing needs of surroundings.

Residential Settlements are areas where the predominant typology is residential rather than commercial, industrial or institutional. Housing may vary significantly within residential areas, and may include single-family housing, multi-family residences etc.

Spatial structure of residential settlements can be defined by its origin of establishment. Generally indigenous settlement patterns tend to differ from settlements created by colonialists. The local architectural vocabulary and the

urban fabric in general are guided by local conditions which include among others, climate, available technology and materials, and the socio-cultural milieu. Consequently, the spatial structures of residential settlements in colonial towns are unique in nature.

Colonial Towns or Cities are the regions which are resultant of colonial manifestation of production, consumption and sustenance.

Colonial towns, which remained as small towns within the close vicinity of the major metropolises and functioned as self – sufficient units, have started transforming themselves due to tremendous development pressure occurring in these metropolises.

Colonial towns are undergoing considerable unhindered transformations due to constant social, economical and political reformations and are grappling with their colonial legacy vis-à-vis the driving forces of modern day development without imbibing Inclusive design.

Inclusive Design is the design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible ... without the need for special adaptation or specialized design (*British Standards Institute, 2005*).

Inclusive spaces are places that everyone can use equally, confidently and independently in everyday activities. It intends to eliminate the barriers that create undue effort and separation.

Inclusive design must be considered at the outset of the design process, and remain integral throughout. This will help deliver an environment in which everyone can access and benefit.

However, this process is missing in the ongoing development plans and strategies of small towns like Chandernagore.

Chandernagore, a small colonial town of West Bengal, India, is articulated in its own tradition. When the whole Bengal was under the English rule as a province of the British administrated India, Chandernagore being part of it created an independent tradition under the French rule.

In small towns like Chandernagore urban development pressure is quite high. On one hand new area is getting added, on the other hand, lack of urban infrastructure in the added area is resulting population concentration in the old town which is transforming the residential settlements of this place.

In the perspective of urban transformation, it is essential to systematize the transforming built environment in methodical techniques to capitalize on the benefit of all user groups. Inclusive design needs to be adopted while designing or redesigning particularly in residential settlements to provide a healthy place for all.

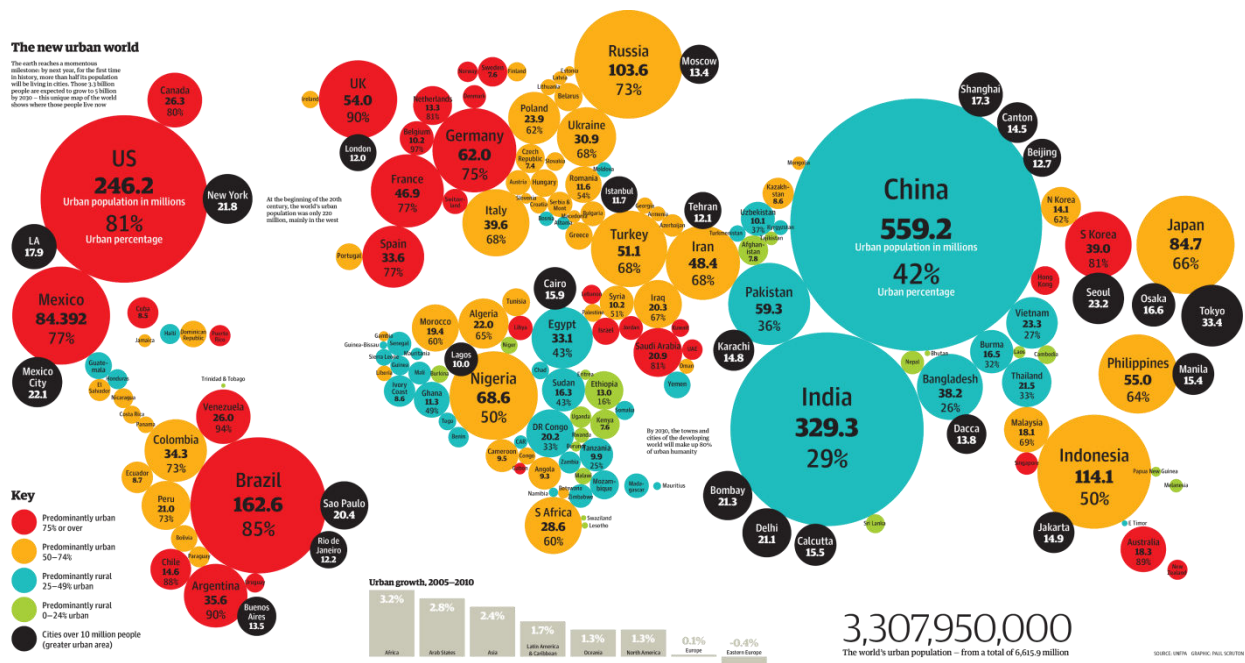
Accordingly, in this paper, an attempt has been made to establish the relevance of incorporating inclusive design as a design outset of development guidelines formed for urban transformation of residential settlements in colonial town Chandernagore.

## **2.0 Discussion**

Since the late 20<sup>th</sup> century, developing countries have been experiencing a range of transformation processes concurrently. On one hand, urban expansion is taking place and the cities are expanding towards their hinterland

(Asian Development Bank, 2008). On the other, transformation of the inner-city areas is taking place, triggering urban transformation process of internal city structure (UN-Habitat, 2010).

Consequently, concentrations of population in urban areas are escalating the need for urban housing (refer fig 1). These changes are very much visible in South East Asian developing countries. A study by the World Bank states that this region will add 203 million new households to its cities—an average of 5.1 million households a year, between 2010 and 2050. (South East Asia Development Matters, 2015)



**Fig.01:** World’s urban Population scenario  
 Source: transville.wordpress.com

Thus, making of affordable housing will constitute both, establishment of new residential settlements and modification of existing residential settlements. As residential settlement determines the overall character of any town as maximum percentage of land goes for residential development, in any urban

development process, in colonial towns also residential settlements create the identity and image of the entire town.

During the establishment of colonial towns, a major theme was to impose the colonial urban planning system on these towns. After the colonial period, these were occupied by newly liberated communities of the independent nations. The independent nations were often under huge political instability, economic crisis and social alteration. With this background, transforming images of these places, as well as, projecting their new identities had usually taken second place.



**Fig.02:** Inclusive Design Dimensions. *Source: <http://idrc.ocadu.ca/>*

In today's world, "Design for All is design for human diversity, social inclusion and equality" (EIDD Stockholm Declaration, 2004) is one of the most discussed and sensitive issue for urban development authorities as well as professionals. According to the European Commission, it "encourage manufacturers and service providers to produce new technologies for everyone: technologies that are suitable for the elderly and people with disabilities, as much as the teenage

techno wizard."The philosophy encourages understanding the meaning and context of the place, participation, human orientation, democratic environment, heterogeneity, use of appropriate technology and alternative approaches towards space design which are essential to address any kind of urban transformation process. *(Refer fig 2)*

In this scenario, urban transformations of residential settlements in colonial towns ask for a detailed appraisal with an inclusive design viewpoint, for understanding the characteristics of the same and generate responsive strategies and recommendations for further interventions in these areas. Chandernagore being a town in transition between colonial legacy and modern day development forces, still has been able to retain its multi-functional inclusive urban space intact.

For example, Chandernagore strand, the most vibrant public place of the town is a multi-functional space. It acts as a recreational space for the entire town, as well as it is the administrative centre of the town. All the major institutions of the town are in and around this public space. Due to the diversity of the space the commercial activities are also encouraged in this area.

Jagadhatri Puja, the biggest festival of the town has a distinct way of emersion. The illuminated procession is the unique feature of this traditional festival. Strand road is the heart of the procession route. Thousands of people come to see this event every year. Strand road acts as the most active spine of the town during this time. *(Refer fig 3)*

Other than festive and special days of the year, for daily life also this place is the heart of the town. People who work in the administrative zone or the students studying in the nearby institutions or the aged people of the town everyone find their retreat in this place. It acts as a place for all. The presence



of the river and the several amenities in and around makes this place lively and acceptable to every age group. (Refer fig 4)



**Fig.03:** Jagadhatri puja emersion, Strand Road. *Source: Author.*



**Fig.04:** Regular Day evening, Strand Road. *Source: Author.*

In spite of several socio-economic changes, the place is able to keep its character as it is. The vitality, acceptability and sense of place are allowing the place to sustain till today. Due to the socio-cultural importance and economic vibrancy the local administration is also enthusiastic to keep up the ethos of the place as it is and helps to transform it with the upcoming trends.

As the city is transforming itself and expanding, more such spaces needs to be created to cater the need to growing population. New residential settlements are getting added as well as old residential areas are transforming themselves. A cross cultural system is influencing the development process. In this context, many intentional and unintentional spaces are getting added to the city structure. Residential settlements also need neighborhood level small interactive spaces to increase the livability. The major theme of making such spaces successful can be adopted from the city level public space (Strand Road as a case here), and design strategies can be adopted from the same. Special

care needs to be given towards designing of such spaces to encourage inclusive living environment.

### **3.0 Conclusion**

Urban transformation has emerged as an important area of inquiry in recent years throughout the world as it recognizes that urban districts are unique, diverse and rich with various potentials that are to be examined and designed for.

Inclusive design keeps the diversity and uniqueness of each individual in mind. Inclusive designers are aware of the context and broader impact of any design and strive to affect a beneficial impact beyond the intended beneficiary of the design.

This understanding and implementation is essential to design better urban environments in residential settlements of colonial towns like Chandernagore. The uniqueness of the town need to appraised and redefined in the process of urban transformation. Inclusive design as a tool can help to develop anticipatory plans, with alternative proposals to compliment the transformational development process of residential settlements of towns like Chandernagore and ultimate outcome would result in improving overall physical habitable environment of such settlements in particular and overall quality of life, of such towns in general.



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*She has graduated from IEST, Shibpur in 2012, followed by Post Graduation from School of Planning and Architecture, New Delhi in the year 2014. She is pursuing Doctoral research work in Jadavpur University, Kolkata with focus on urban studies revolving around settlements and related issues.*



# Application of solar energy in the context of universal design

**Abhiroop Das**

## **Abstract**

Throughout the world, environmental degradation has become a common factor due to the rapid growth of communities and subsequent resource augmentation. There is also a relationship between the growth of economy and environmental degradation, based on population densities, economic growth, environmental factors and others. Holistically, the environmental impact of a community depends on the activity pattern of people which is in relation with the carrying capacity of the ecosystem. This paper deals with the proper application of solar energy which acts as a tool for preservation of the ecosystem in the context of universal design process.

## **1.0 Introduction**

**Solar Energy** has been harnessed by humans since the ancient period. The radiation from the sun along with other solar powered resources such as wind, hydroelectricity and biomass etc. accounts for most of the available renewable energy on Earth. Solar powered electrical generation are generally in the form of heat engines and photovoltaic. The application of solar energy also includes space heating and cooling, day lighting, high temperature process heat for industrial purposes and also the solar panels which are the most common and effective way to harvest the solar energy. Solar energy can also be broadly

characterized into passive and active solar depending on the way of capturing, converting and distributing sunlight.

(Sinha S & Kumar A., 2012).

**Universal Design** is the design and composition of an environment, which would meet the need of people of all age groups, so that it can be easily accessed, understood and used in an extensive way regardless of their age, size, ability or disability. It also strives in making buildings efficient and usable for a wide variety of people to use including older and disabled.

Now, universal design principles have a close propinquity with the green houses having a good thermal envelope where the sun and its energy have been playing a pivotal role. The energy from the sun along with the proper insulating materials and creation of comfortable indoor environment is benefitted by all occupants.

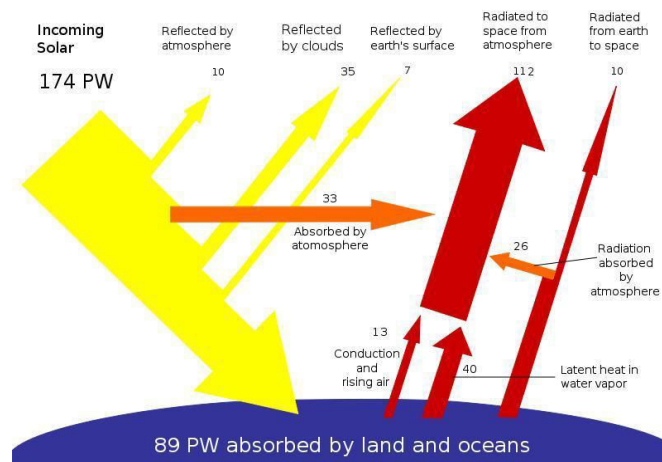
In this context, a research work has been carried out, to investigate the application of solar energy in the universal design process and formulate necessary recommendations based on this study.

Accordingly, in this paper, an attempt has been made to synthesize the outcome of this research work, in a structured and sequential manner.

## **2.0 Discussion**

As per study, it has become evident that the Earth receives 174 PW ( Petawatts) of incoming solar radiation at the upper atmosphere. 30 % is reflected back to the space while the rest is absorbed by land, oceans and clouds. (SinhaS.,2012).

The solar light spectrum at the Earth's surface is mostly spread across the visible and near infrared ranges with a small part on the near ultraviolet. The land, ocean and atmosphere absorb solar radiation which is the cause of rise in temperature. Warm air containing evaporated water from the oceans rises, causing atmospheric circulation or convection. ( Sinha S & Kumar A., 2012).



**Fig. 1:** About half the incoming solar energy reaches the Earth's surface.

*Source: www.google.com*

The land masses and the oceans absorb solar energy and keep the surface at an average temperature of 14°C. The green plants also convert solar energy into chemical energy by the help of photosynthesis.

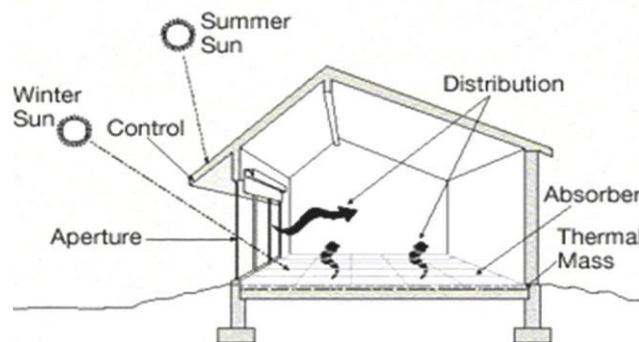
Now, as far as application of solar energy in the setting of universal design is concerned, the said investigation has been carried out, based on passive solar and active solar technologies which are considered to be basic important parameters. Passive solar design is based on the understanding of how the sun moves through the sky at different times of the year.

Passive solar buildings have a synergetic relationship with the environment, they utilize the winter sun for heating and reject the summer sun. Throughout



the year, natural day lighting is enjoyed and this is achieved by designing the house with proper orientation of the site, floor plan layout, the proper placement of windows, overhangs, thermal mass, thermal insulation etc.

Pertaining to universal design, it is possible to design a building with passive solar technologies thus creating magnificent spaces which are well ventilated and lighted with proper day lighting, having good visual potential and thus feeling comfortable throughout the year. This aligns with the notion of universal design as it renders the building more usable, efficient and accessible in a way providing more natural light.



**Fig. 2:** Elements of passive solar design. *Source :* [www.google.com](http://www.google.com)

Some passive systems use a small amount of conventional energy to control dampers, shutters, night insulation, and other devices that enhance solar energy collection, storage, use, and reduce undesirable heat transfer. (Sinha S & Kumar A., 2012). Active solar systems such as photovoltaic (solar electric) or solar thermal are another way to take advantage of the sun's energy. Unlike passive, these systems generally rely upon mechanical systems to harness the sun's energy. The most popular active solar system is the photovoltaic or PV systems. These can be connected to the electric grid or can be off-grid completely.

Solar thermal systems are another form of active solar that utilizes the sun's energy to heat the water, which can be used to heat the house or to provide domestic hot water.

The roof mounted solar collector to heat the water or glycol, is the best system to trust upon. This collector is fixed into the house and the hot water is run through a heat exchanger where the heat is transferred to water in a storage tank.

As discussed above, all these features of passive and active solar systems result in a very comfortable indoor environment with even temperatures meeting the needs of people of all age groups and striving in making buildings efficient and usable as far as universal design is concerned.

### **3.0 Conclusion**

Based on all these discussions, the relevant recommendation have been formulated and stated, as follows:

- The right amount of solar energy should be achieved so that it can provide warmth during winter and prevent excess heating in summer.
- Site location and orientation, layout of the room, design of windows and shadings should be taken into consideration for proper utilizing of solar energythere by achieving comfortable temperature and good indoor air quality.
- Attempt should be made to use freely available solar energy to compensate for dwindling biomass source of energy.

- All the elements such as thermal mass, shading and ventilation, solar electric and solar thermal systems etc. that work alongside with each other should be considered holistically in the universal design process with primary focus on passive building design and use of active solar systems could be utilized to supplement it only.

In the perspective of this introduction, discussion and the conclusion of the research work, considering the application of solar energy as an important parameter in the universal design process. It is evident that sun and its energy creates a substantial impact on the designing of buildings. Moreover, these buildings are accessed and used by people. Hence a building acts as a proponent of solar energy on one side and universal design, adhering to users on the other.

In future, this would help to plan necessary interventions in this particular subject matter. Apart from the radiation of the sun other forms of power resources such as wind, hydroelectricity and biomass could also be adjudged in future in relation to universal design, which accounts for most of the available renewable energy on Earth.

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**Abhiroop Das** passed B.Arch from Piloo Modi college of Architecture,Cuttack,Orissa in the year 2006. After passing joined as an Assistant Architect in P.Mitra and associates and worked there for about three years.

In 2009, took admission in Jadavpur University, Kolkata, for Post Graduation course in Architecture, Masters in Urban Design and passed with the result of First class standing first in order of merit and was awarded University gold medal in the year 2011.

Later in that year, joined as Assistant Professor in Birla Institute of Technology, Mesra, Patna campus, in the Department of Architecture and continued there

*for one and half years. I also worked as Assistant Professor in Piloos Modi college of Architecture for a brief stint and presently have been attached with Om Dayal School of Architecture, Uluberia, Howrah as an Assistant Professor. Also I worked as visiting faculty in the Department of Architecture in Jadavpur University for about three years. I am also continuing as a consulting architect and urban designer in some micro level projects.*

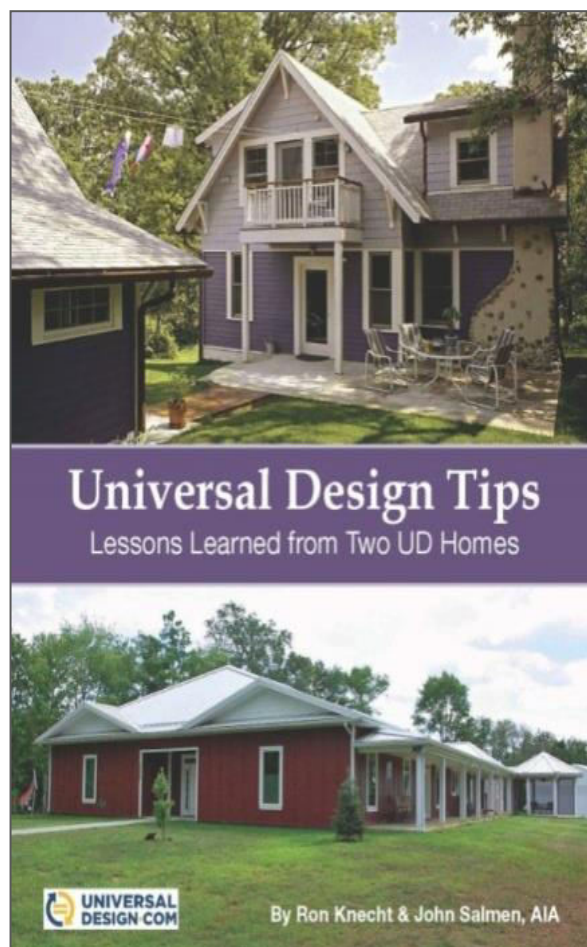
*Apart from this, I am in the continuous process of pursuing PhD from Jadavpur University and the subject of my thesis is regarding Mass rapid transit system related urban development in the existing core areas of a city.*

*There are also some papers awaiting to be published in the journals and one of the papers has already been published in ABACUS Journal of Spring 2014.*



## Book Releases and Reviews

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.

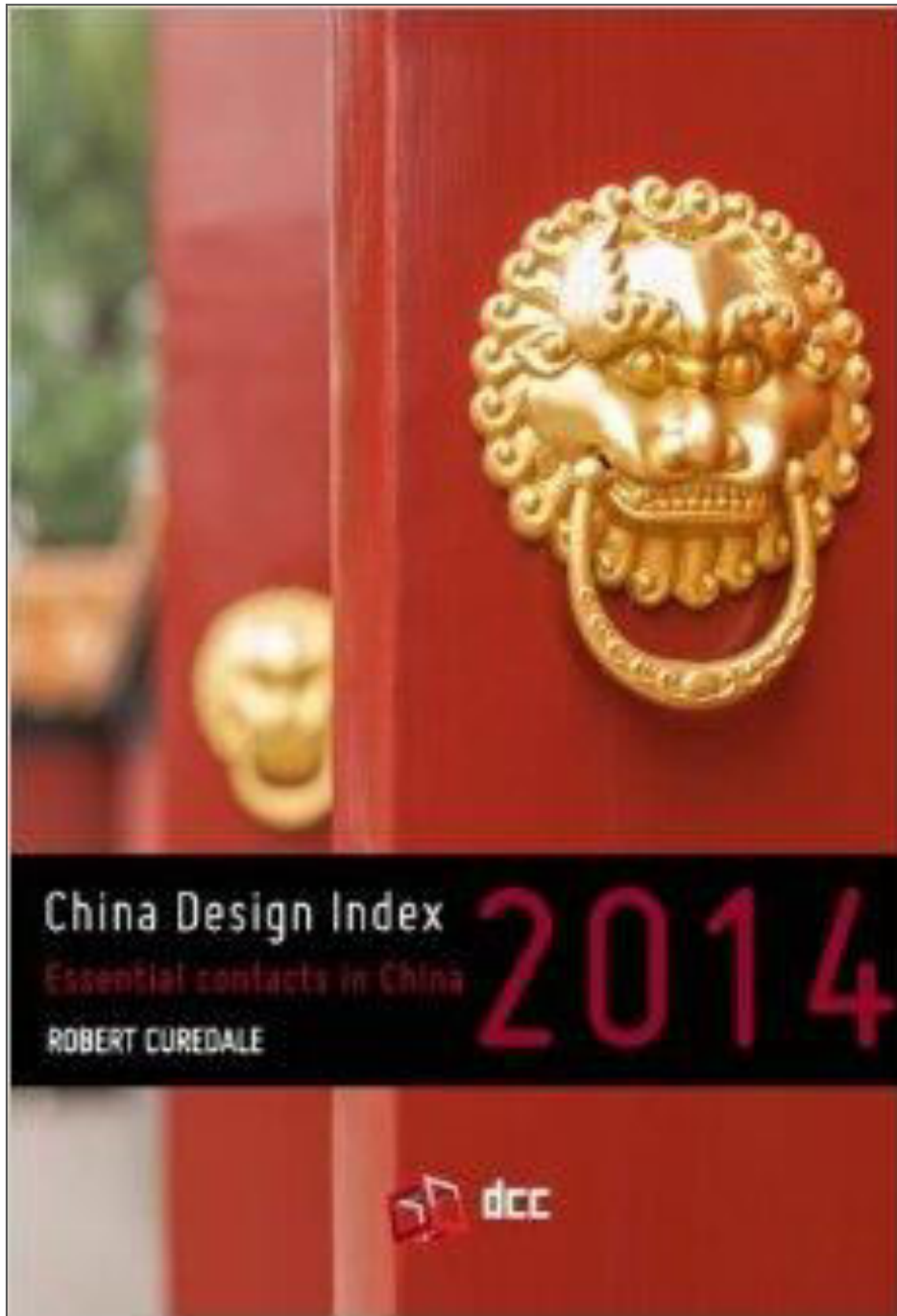
The rest of the book is organized according to different areas or elements of the home (i.e. exterior doors, bathing, and kitchen counters, just to name a few.) Whether designing a whole house or simply remodeling one area, *Universal Design Tips* makes it easy to quickly refer to the relevant section 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.

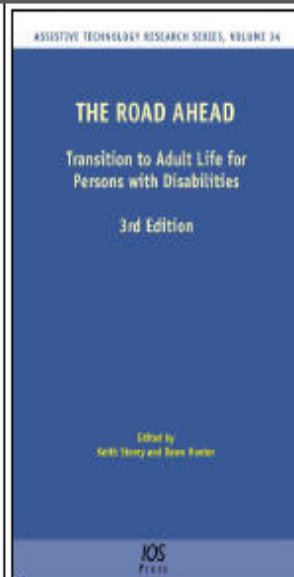


## China Design Index 2014:



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

## The Road Ahead, Transition to Adult Life for Persons with Disabilities:



### **The Road Ahead**

Transition to Adult Life for Persons with Disabilities

Volume 34 Assistive Technology Research Series

Editors: Storey, K., Hunter, D.

December 2013, 318 pp., hardcover (revised 3rd edition)

ISBN 978-1-61499-312-4 (print)

ISBN 978-1-61499-313-1 (online)

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."

## Design for All, Aree DiRistoro:



Luigi Bandini Buti  
**DESIGN FOR ALL | AREE DI RISTORO | il caso Autogrill |**  
Maggioli Editore, 2013

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

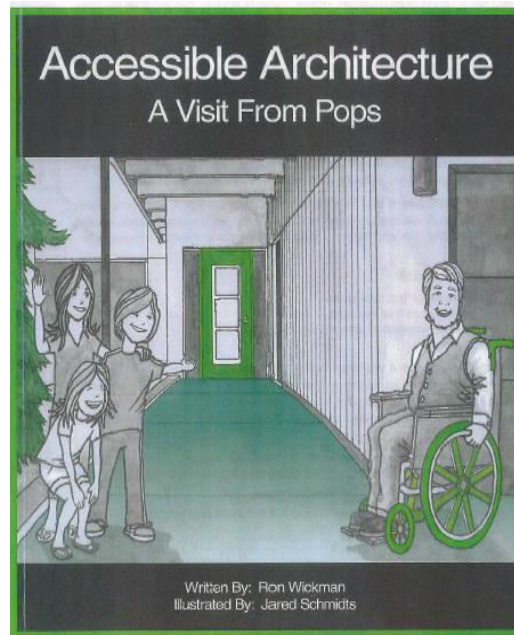
This book has been born following the collaboration with Autogrill that, for its new facilities "Villoresi Est", has developed an innovative, Design for All oriented project. We then realized that the cares foreseen for "all" would not be noted by "the majority".

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.

## Accessible Architecture, A Visit from Pops:



### **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 Councillor 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.

Visibility 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.

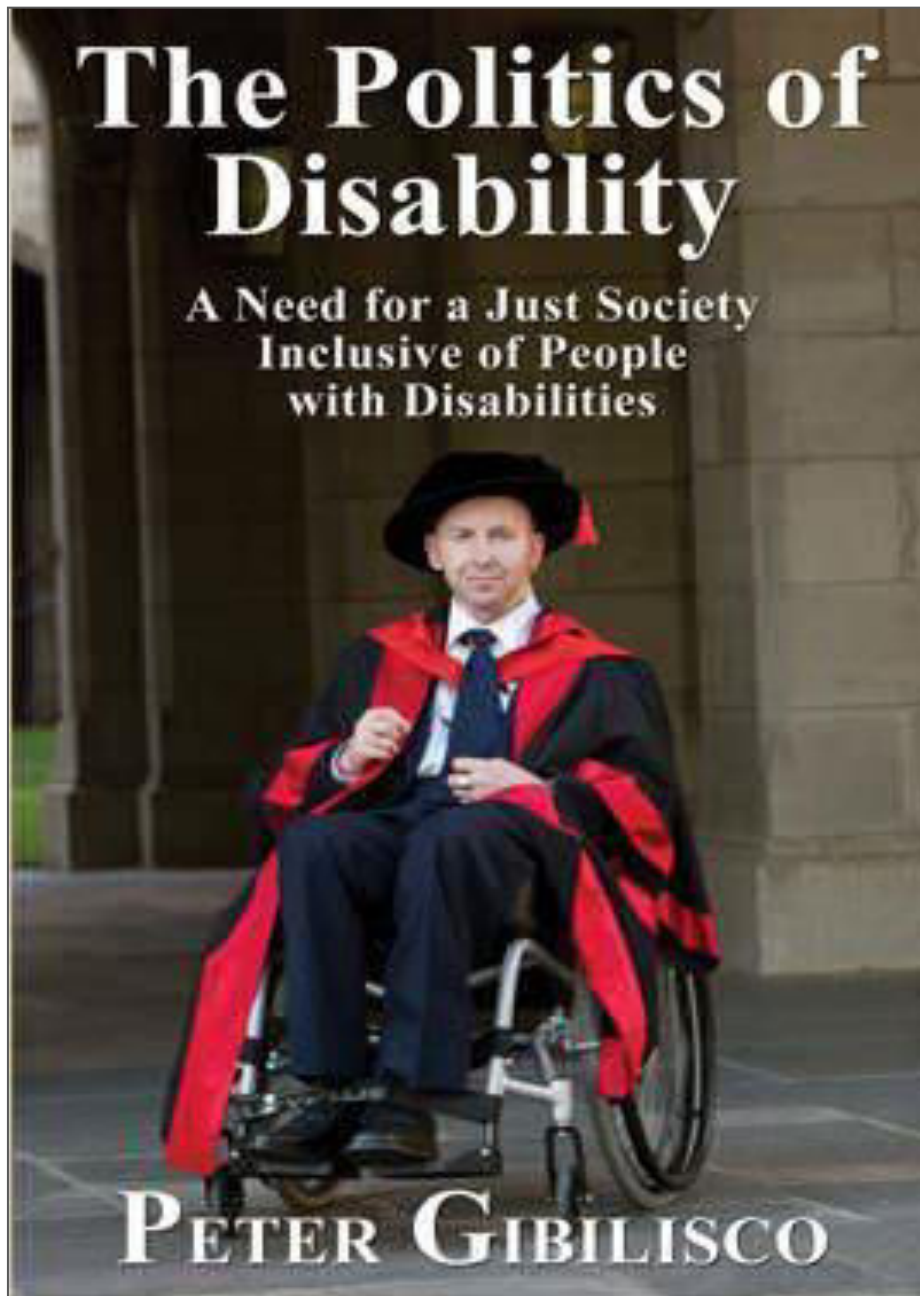
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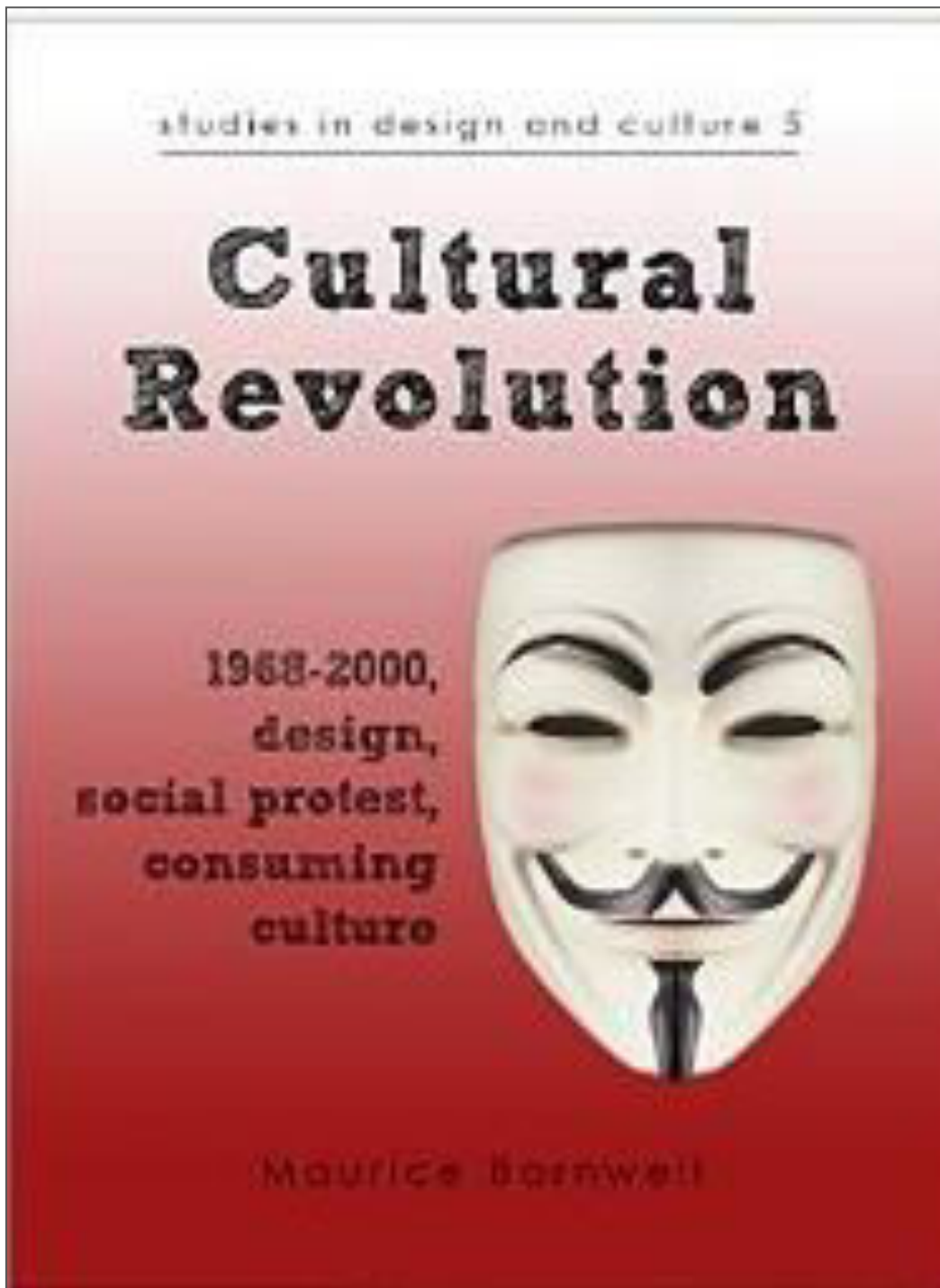


## The Politics of Disability by Peter Gibilisco:



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.

Cultural Revolution by Maurice Barnwell (Author):



## Methods, tools, applications. Volume 1–2

(Steffan, 2012):

### **Design for All – the project for everyone. Methods, tools, applications.** Volume 1- 2 (Steffan, 2012)

The publication highlights the multidisciplinary and cross-disciplinary of the Design for All approach, both in terms of issues addressed and of field of application. The accessibility of places and objects is nowadays a minimum requirement: it is only the starting point to allow their use by the widest range of people possible. Through professional experience and research, the paper tackles problems, methodologies and working tools, benchmarks.

The first volume covers the main areas of research and presents some examples at urban scale; the second volume illustrates examples of architectural design, products, services, university education.

The lack of compliance of the built environment and of the products, with needs that can be very different, causes a state of handicap. The lack of ability is a handicap only if the project has not taken it into account.

With these books we intend to stimulate debate, in-depth research, specialized studies, so that Design for All can be increasingly known and applied in more and more research and professional areas.



Published in Italian in December 2012 by Maggioli Editore (Santarcangelo di Romagna RN, Italy).

[http://ordini.maggioli.it/clienti/product\\_info.php?products\\_id=8832](http://ordini.maggioli.it/clienti/product_info.php?products_id=8832) Volume 1

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The on-line English version is also available since October 2014:

<http://www.maggiolieditore.it/ebook/tecnica/design-for-all-the-project-for-everyone-first-part.html>

<http://www.maggiolieditore.it/ebook/tecnica/design-for-all-the-project-for-everyone-second-part.html>

*"Ideas, even good ideas, flourish only when practitioners commit to sharing their experiences, perspectives and aspirations. By organizing this publication and convening a distinguished international group of contributors, Editor Isabella Tiziana Steffan helps to establish the current state-of-the-art and affirms the significant potential of Design-for-All. She also delivers fresh inspiration to an expanded audience critically important to engage if Design-for-All/Universal Design is to realize its promise in the coming years.(...)We salute Editor Steffan for her passion, focus and hard work to bring this valuable contribution to fruition."* (Valerie Fletcher)



# Universal Design in Higher Education:

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## UNIVERSAL DESIGN IN HIGHER EDUCATION

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EDITED BY SHERYL E. BURGSTAHLER • FOREWORD BY MICHAEL K. YOUNG

This second edition of the classic *Universal Design in Higher Education* is a comprehensive, up-to-the-minute guide for creating fully accessible college and university programs. The second edition has been thoroughly revised and expanded, and it addresses major recent changes in universities and colleges, the law, and technology.

As larger numbers of people with disabilities attend postsecondary educational institutions, there have been increased efforts to make the full array of classes, services, and programs accessible to all students. This revised edition provides both a full survey of those measures and practical guidance for schools as they work to turn the goal of universal accessibility into a reality. As such, it makes an indispensable contribution to the growing body of literature on special education and universal design. This book will be of particular value to university and college administrators, and to special education researchers, teachers, and activists.

**SHERYL E. BURGSTAHLER** is an affiliate professor in the College of Education at the University of Washington in Seattle, and founder and director of the university's Disabilities, Opportunities, Internetworking, and Technology (DO-IT) and Access Technology Centers.

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(OFFER EXPIRES 1/8/2016)

**“Sheryl Burgstahler has assembled a great set of chapters and authors on universal design in higher education. It’s a must-have book for all universities, as it covers universal design of instruction, physical spaces, student services, technology, and provides examples of best practices.”**

—JONATHAN LAZAR, PROFESSOR OF COMPUTER AND INFORMATION SCIENCES, TOWSON UNIVERSITY, AND CO-AUTHOR OF *ENHANCING DIGITAL ACCESSIBILITY THROUGH PROCESS AND POLICY*

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### Product Description

In this book, Elvio Bonollo takes us on a 'learning journey' about design including a scholarly explanation of the characteristics and power of the design process. It provides valuable insights into the attitudes, knowledge and skills that underpin the design discipline at an introductory level of expertise, and has been developed to meet the needs of aspiring designers in many areas including industrial design, design and technology, art and design and architecture. Elvio uses an operational model of the design process - along with related educational strategies, learning outcomes and an ordered set of design briefs - to develop a systematic, problem-based method for learning design from a first principles viewpoint. The beauty of this approach is that it brings structured learning to aspiring designers whilst being mindful of diverse cultures and backgrounds. Each part of this book encourages self-expression, self-confidence and exploration: it is has been carefully designed to take the reader on a highly motivating journey of design thinking and creativity, supported by excellent sample solutions to design problems, lucid discussions and extensive references. These solutions, developed by design students, serve as novel examples of how to solve real problems through innovative design without restraining creative freedom and individual personality. The design learning method and strategies in this book will greatly assist design and technology teachers, students of design, aspiring designers and any individual with an interest in professional design practice.

I cannot recommend this book highly enough, it was a complete lifesaver throughout my undergraduate studies and honours degree and now continues to serve me well as I move into industry practice. The content is easy to understand and follow, providing a practical guide to understanding design principles and every aspect of the design process. It includes great project examples and reflects the wealth of knowledge and experience possessed by this accomplished educator. I have purchased multiple copies of this book for peers and would suggest any student who is studying a design discipline to pick up their own copy as this has quickly become the most useful book in my design collection.

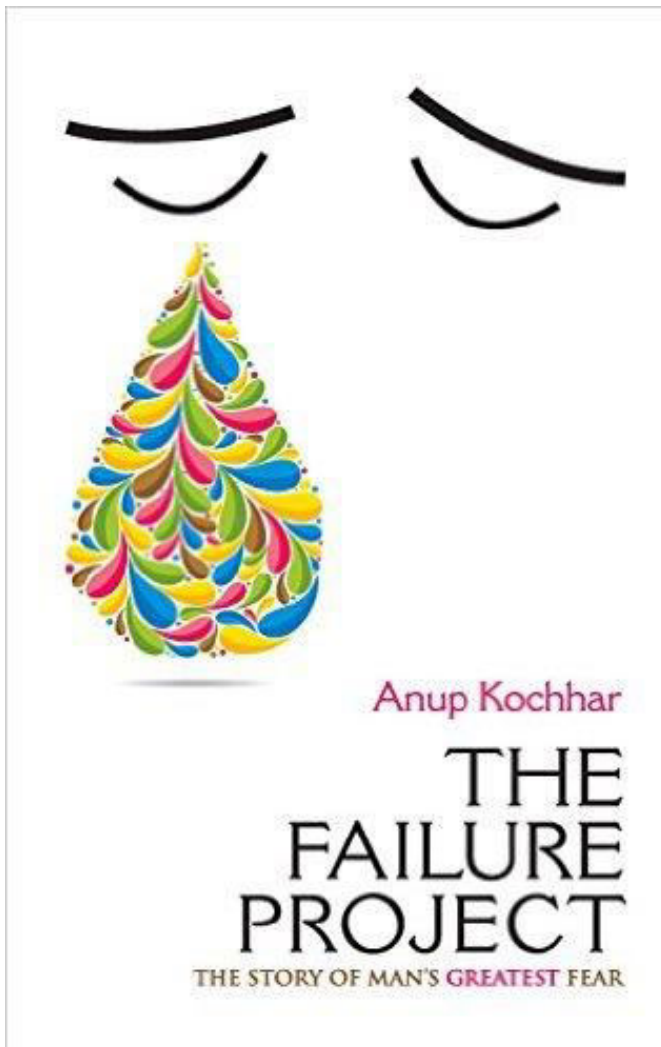
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★★★★★ A 'Must Have'.

By [Amazon Customer](#) on 7 April 2016

As a Design Education professional of many years standing, I endorse this book without reservation. It is comprehensive, lucid and above all, useful in a very accessible level at the coalface. Professor Bonolo has an enormous cache of experience as an engineer, designer and design educator and his experience is well demonstrated in this book. A 'must have' for anyone in the business of educating or being educated in the product design arena.

## The Failure Project: The Story of Man's Greatest Fear



This amazing, comprehensive and compassionate book helps us understand the anatomy, psychology and management of failure - the greatest, and often the most secret, fear of Man.

Failure destroys lives. It damages confidence and crushes the spirit. Throughout our lives we endeavour to manage our thoughts, actions and results so as not to be branded as failures. Despite our best intentions, life does have a way of throwing curve balls and surprising us. Things do not always go the way we planned or wished for. Failure happens. And it will continue to happen. For most people failure is akin to a dreaded disease that must be prevented at

any cost.

Failure is like fire - it has the power to singe or destroy completely. Few of us remember that failure can also be harnessed creatively. All that it requires is a different perspective.

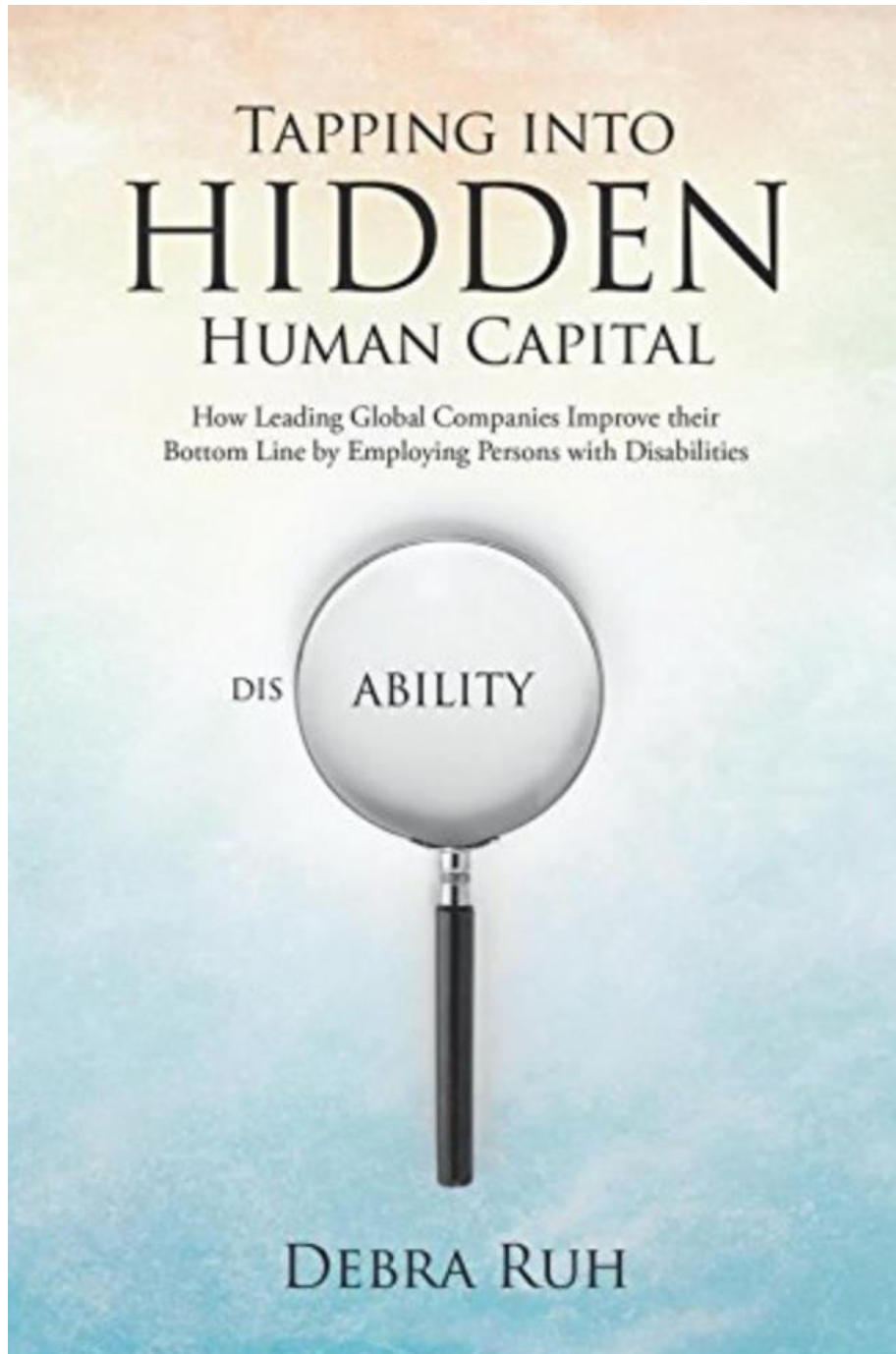
What do we know of failure? More importantly, how much do we know about it? The first step to overcoming our inherent fear of failure is to know the enemy - inside and out.

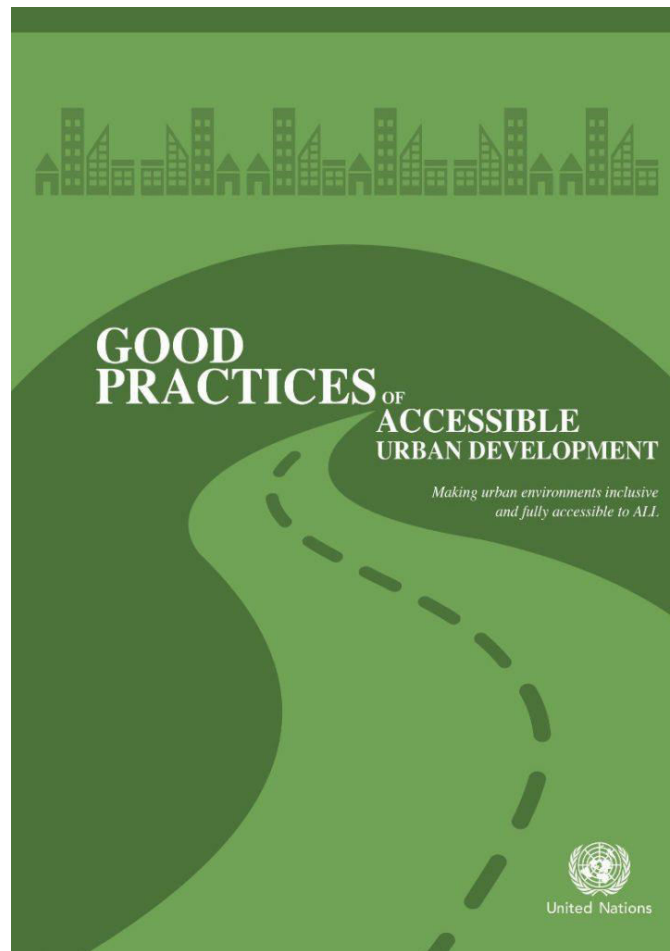
The book is now available in paper back and as an e-book from Amazon



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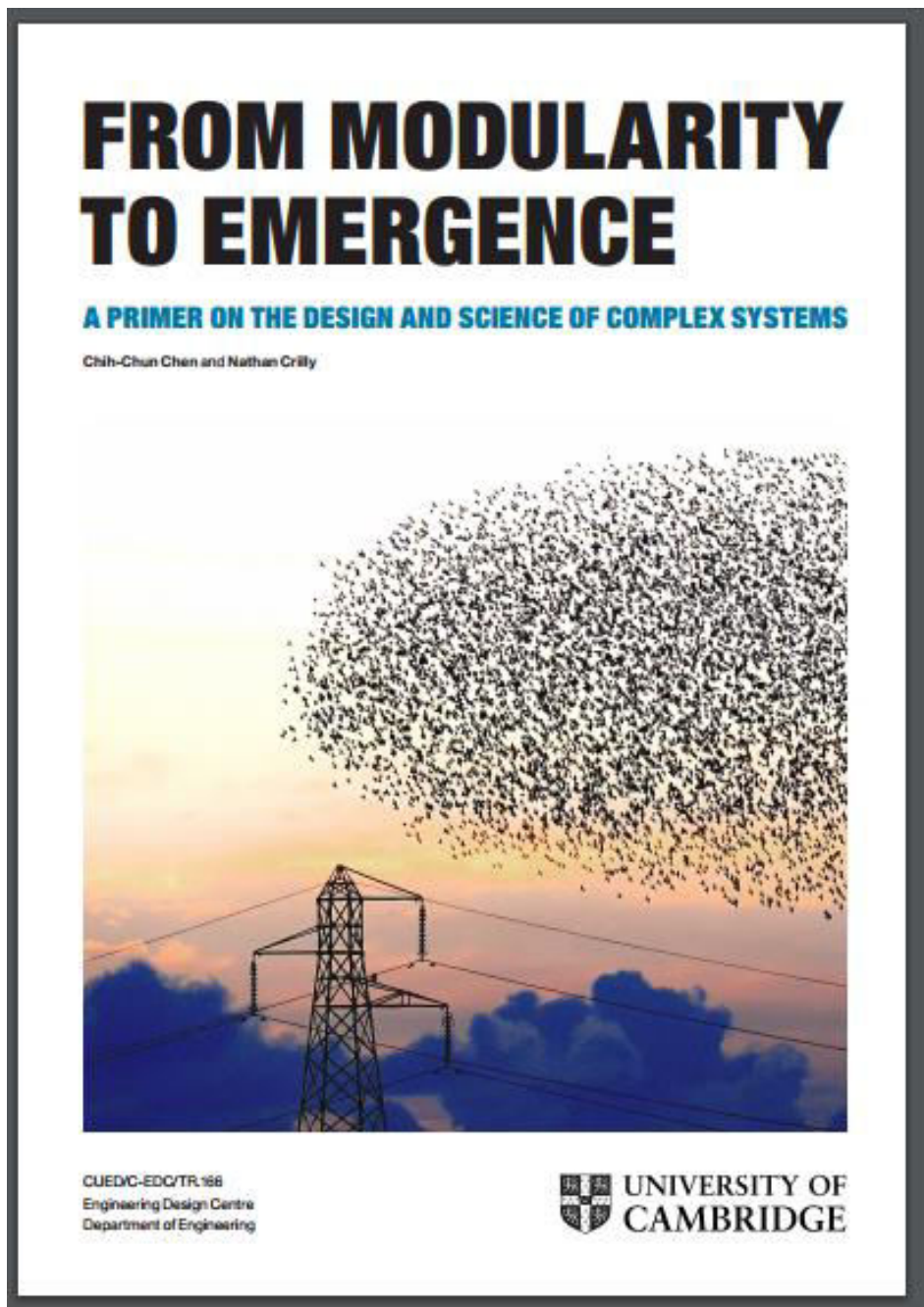


In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: “Good practices of accessible urban development”.

The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services.

The publication concludes with strategies and innovations for promoting accessible urban development.

The advance unedited text is available  
at:[http://www.un.org/disabilities/documents/desa/good\\_practices\\_urban\\_dev.pdf](http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf)



Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, *\_A Primer on the Design and Science of Complex Systems\_*.

This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).

The book is available at URL:

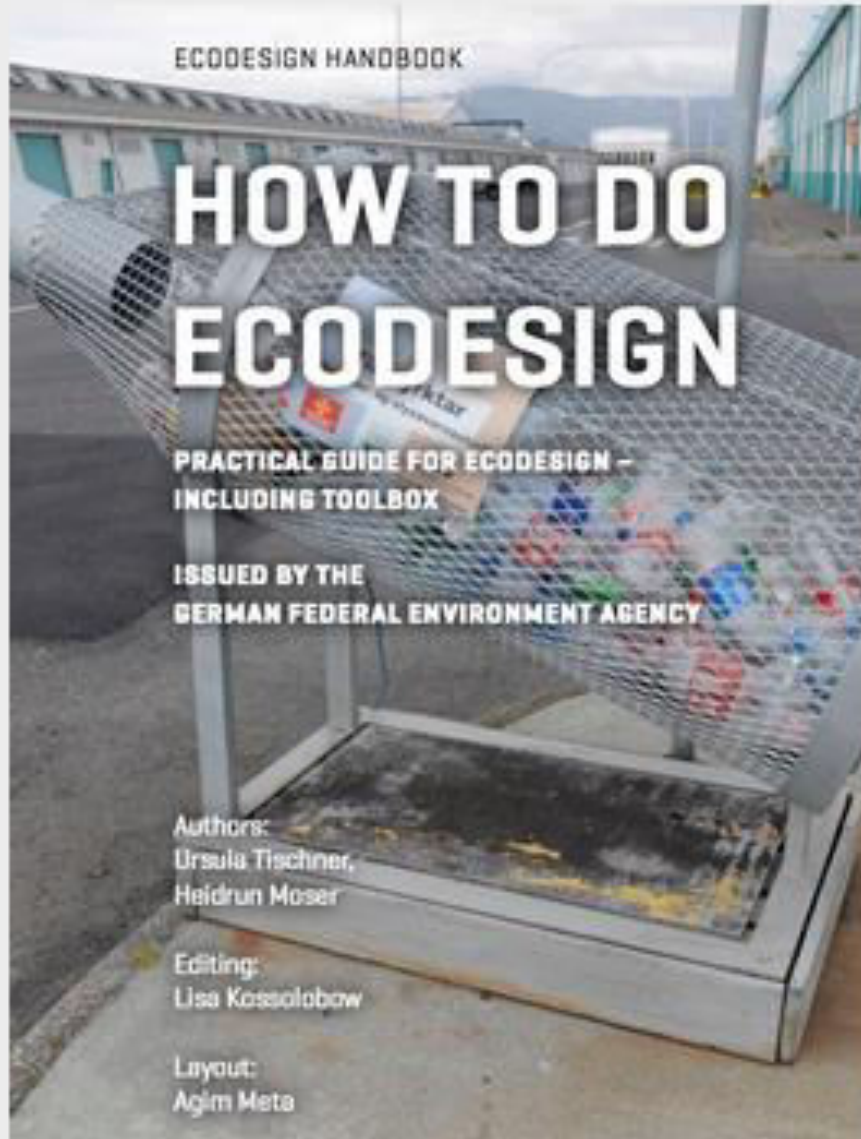
<http://complexityprimer.eng.cam.ac.uk>



# **Changing Paradigms: Designing for a Sustainable Future**



# New iBook / ebook: HOW TO DO ECODESIGN



Practical Guide for Ecodesign – Including a  
Toolbox

Author: Ursula Tischner

**NOW AVAILABLE**

## **Case Studies in Applied Behavior Analysis for Students and Adults with Disabilities**

**Keith Storey, Ph.D., BCBA-D**

**Linda Haymes, Ph.D., BCBA-D**

This book responds to a critical need for highly qualified personnel who will become exemplary professionals because of their advanced knowledge, skills, and experiences in working with students and adults that have varying disabilities, including Autism Spectrum Disorders (ASD). Since Board Certification for behavior analysts was introduced, there has been an expansion of training programs in Applied Behavior Analysis to meet the demands from school districts, health insurers, and families. In spite of these developments, a case studies book has not been available that uses the Behavior Analyst Certification Board Task List, Fourth Edition (BACB) guidelines for educating individuals receiving their BCBA, or for those in the field such as teachers, and service providers. The goal of this book is to fill that need. Twenty-one case studies are provided—case studies with complete analysis, case studies with partial analysis, and case studies without analysis. The use of this text will improve the comprehensive analysis and coverage of the developing supports for individuals with disabilities, provide direct applicability to applied settings, and the ability to use the case studies for assignments and/or exams. The format, readability, and detailed description of instructional methodology makes this text a valued resource for instructors and behavior analysts responsible for improving the skills of people with disabilities.

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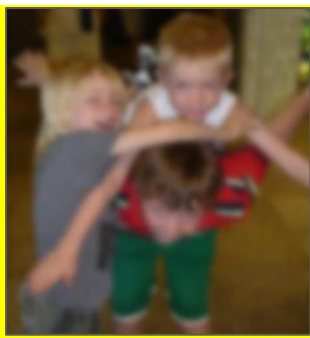








## Announcements and Miscellaneous



## Appeals

The Social Welfare Department (SWD) will invite employers of persons with disabilities to submit applications for the 15th batch of Support Program for Employees with Disabilities (SPED) from December 12 until January 20, 2017.

To support the employment of persons with disabilities, the SWD launched SPED in June 2013 to provide employers of persons with disabilities with a one-off subsidy for each employee with disabilities for procurement of assistive devices and/or workplace modifications. The program seeks to facilitate employees with disabilities in discharging their duties in the workplace and enhance their work efficiency.

The subsidy is capped at a maximum support level of \$20,000 for each employee with disabilities. Starting from 2014-15, a grant of up to \$40,000 may be considered for deserving cases for which the price of a single assistive device and its essential accessories exceeds \$20,000.

A wide range of assistive devices and workplace modifications which cater to the special needs of employees with disabilities at the workplace will be considered. Examples include computer accessories or adaptive equipment, optical magnifying device, hearing and assistive devices, Braille products and handrails.

The Po Leung Kuk has been commissioned to serve as the SPED Administrator.

It will assist in administering and promoting SPED, provide advisory services and follow up on the progress of the subsidized programs, prepare assessments on the applications and make recommendations to the Committee on SPED set up by the SWD for consideration.

Employers may apply for a subsidy under SPED through nomination of the following referring organizations:

- (a) non-governmental organizations (NGOs) operating SWD-subsvented vocational rehabilitation services;
- (b) NGOs running training courses for persons with disabilities or persons recovering from work injuries with the funding support of the Employees Retraining Board;
- (c) the Selective Placement Division of the Labour Department;
- (d) the Vocational Training Council; or
- (e) the SPED Administrator (Po Leung Kuk).

Employers may submit their completed application forms together with the required documents by mail or by hand to the SWD through the referring organizations. No application fee is required and each applicant may submit more than one application.

For enquiries, please contact Po Leung Kuk SPED Office by phone at 3980 9677, by email at [sped@poleungkuk.org.hk](mailto:sped@poleungkuk.org.hk) or by fax at 3980 9633.



## News

1.

### **Decade after global treaty's adoption, persons with disabilities still at 'grave disadvantage': UN chief**

United Nations Secretary-General Ban Ki-moon highlighted the challenges people with disabilities face despite progress made since the adoption of a global treaty to promote their rights a decade ago.

"In the past decade, we have seen much progress. But, persons with disabilities continue to face grave disadvantages," Mr. Ban told a high-level meeting on the 10th anniversary of the adoption of the Convention on the Rights of Persons with Disabilities (CRPD), organized by the UN General Assembly.

Adopted on 13 December 2006, the Convention is now one of the most widely ratified international human rights instruments with 169 Parties.

Along with its Optional Protocol, the Convention has helped to promote the rights and advancement of persons with disabilities and bring them to the centre of development efforts, he said.

This year, the world embarked on implementing the 2030 Agenda for Sustainable Development with 17 integrated and interdependent goals, widely known as the SDGs.

The UN chief urged the international community to end discrimination, remove barriers and ensure equal participation for all persons with disabilities, who are still commonly denied fundamental rights, and are more likely to live in poverty.



Children with disabilities are less likely than their non-disabled peers to start school or complete a full education. And adults with disabilities are less likely to be employed. Inaccessible work places, discrimination and negative attitudes are a major barrier. People with disabilities also have more difficulty in accessing health-care providers with appropriate skills, and they are more vulnerable to secondary health conditions and premature death, he added.

As the Sustainable Development Goals promise to leave no one behind, “we must secure the full inclusion and effective participation of persons with disabilities in society and development,” he said.

Disability is addressed in the 2030 Agenda, a Charter on Inclusion of Persons with Disabilities in Humanitarian Action adopted at the World Humanitarian Summit in Istanbul, Turkey, and the New Urban Agenda adopted in October by the UN Conference on Housing and Sustainable Urban Development, known as Habitat III in Quito, Ecuador.

“Our duty now is to turn these commitments into action,” he said.

Various events were held at the UN Headquarters to celebrate the 10th anniversary of the Convention’s adoption and International Day of Persons with Disabilities, which is annually observed on 3 December. These included an award ceremony for good practices in the employment of persons with disabilities and the soft launch of the UN-backed CRPD mobile application.

2.

### **International Day of Persons with Disabilities observed**

Minister for Health Gagan Thapa on Saturday expressed his commitment to take necessary initiatives to endorse the act related to persons with disabilities.



Speaking during a programme organised to mark the 25th International Day of Persons with Disabilities, Minister Thapa said a committee would be formed under the ministry soon to work in the disability sector.

Sudarshan Subedi, president of the National Federation of the Disabled Nepal, emphasised on the need for effective enforcement of a Supreme Court order in favour of persons with disabilities.

According to the national census 2011, two to three percent of the total population of Nepal have some forms of disabilities.

A morning rally was also organised in the Capital to mark the International Day of Persons with Disabilities.

Since 1992, the United Nations International Day of Persons with Disabilities has been celebrated annually on December 3 around the world.

In his message on the occasion, UN Secretary-General Ban Ki-moon said: "Let us work together for the full and equal participation of persons with disabilities in an inclusive and sustainable world that embraces humanity in all its diversity."

The theme for this year's International Day of Persons with Disabilities is "Achieving 17 Goals for the Future We Want".

The theme notes the recent adoption of the 17 Sustainable Development Goals (SDGs) and the role of these goals in building a more inclusive and equitable world for persons with disabilities.

(Source: kathmandupost)

**3.**

### **DFA Awards 2016**

#### **A Platform and Framework for a Better Asia**

(HONG KONG, 5 December 2016) Organised by the Hong Kong Design Centre (HKDC), with Create Hong Kong of the Hong Kong Special Administrative Region Government as the major sponsor, the DFA Awards presentation ceremonies were completed in applause last week. The winning projects and

the winners' portfolios were also showcased at annual DFA Awards Exhibition at HKDC Pavilion during the InnoDesignTech Expo.

On 30 November, over 400 participants attended the presentation ceremony of the DFA Design for Asia Awards and the DFA Hong Kong Young Design Talent Award. On 2 December the Business of Design Week (BODW) Gala Dinner appealed to design gurus, business leaders and government officials around the world to congratulate the winners of DFA Lifetime Achievement Award, DFA Design Leadership Award and DFA World's Outstanding Chinese Designer.

"DFA Awards is a Hong Kong Design Centre initiative to recognise and celebrate outstanding design leaders, remarkable design projects, and talented young designers in Asia. The intention of the Awards is to create a platform and framework for designers to shape, build and develop Asia to become a better place to live, work and play." said Professor Eric C. Yim, JP, Chairman of Board of Directors, Hong Kong Design Centre.

### **Honours to Design Leaders**

The DFA Lifetime Achievement Award (DFA LAA) 2016 went to Mr. AHN Sang-soo, a Korean typographer and graphic designer. He has worked in the creative industry for more than 40 years with a rich oeuvre of cross disciplinary production and innovation. In 1985, he expressed his interest in Korean typeface at his early career and founded Ahn Graphics and then created his first self-titled typeface configuration "Ahn Sang-soo". Also passionate in education, he served as a Professor at the College of Fine Arts & Design at his alma mater Hongik University for 20 years. He is currently Director of Paju Typography Institute in Korea (PaTI), Guest Professor in Royal College of Arts, London and Invited Professor in Central Academy of Fine Arts, Beijing. He has been serving as a Chairman of the Board of Seoul Design Foundation since 2012.

The DFA Design Leadership Award (DFA DLA) 2016 was conferred onto Mr. Antony LO Hsiang-an, the CEO of Giant Global Group. Lo has been a key leader at Giant and under Lo's leadership, it launched its own brand in 1981. Giant is a global bicycle brand, consists of 9 manufacturing factories around the world, with more than 10,000 retail partners. The name of "Giant" now is a major cycling brand in the world, provides high quality innovative cycling products through the specialty retailing network, to inspire adventure and share the joy of the ride. Giant also collaborated with the Taipei Municipal Department of

Transportation to develop the YouBike public bicycle sharing service for Taipei city.

Mr. William CHANG Suk-ping, Art Director and Costume Designer, was named the DFA World's Outstanding Chinese Designer (DFA WOCD) 2016. Having been trained at a film school in Vancouver, Chang began working in the late 1970s during Hong Kong's popular culture boom. In the 1981, Chang was appointed as the art director of the thriller "Love Massacre". Later, he collaborated unfailingly with Hong Kong director Wong Kar Wai. Besides films, William Chang has also engaged in other side design projects that have made a difference in their respective fields. From designing the interior of a private residence to airline uniforms, and from editing feature films to television advertisements, he has always been determined to apply his skills in a brand new context to defamiliarise himself and push the envelope of design.

### **Recognition of Design Excellence**

The DFA Design for Asia Awards' entry number and quality illustrate the growth of the Asian design power. Around 900 entries from over 20 countries, by 22 categories under 4 design disciplines including apparel & accessory design, communication design, environmental design, and product & industrial design, were received in 2016. Compared with the numbers in 2013, entries from Taiwan and South Korea have been remarkably increased around 17% and 48% respectively, while the number of award winners from Mainland China increased significantly from 11 to 39 in three years' time. This year, 40 outstanding design projects and 17 Gold Award winning designs of Category Award from open submissions were nominated, amid 20 projects having been recognised as Grand Award, Grand Award for Culture, Grand Award for Sustainability, Grand Award for Technology or Grand Award Finalist. Selected Grand Award winners were also invited to share their ideas at the Business of Design Week.

### **Window of Global Perspective**

As the design hub in Asia, Hong Kong is always a window to the international stage. This year, 16 design practitioners or graduates from over 200 applications, were awarded the DFA Hong Kong Young Design Talent Award (DFA HKYDTA). With the financial sponsorship by Create Hong Kong, the Hong Kong Design Institute and School of Design of the Hong Kong Polytechnic University, 13 of them will be granted up to HK\$5,000,000 in total for work attachment or study in overseas for 6 to 12 months. The DFA HKYDTA 2016

comprises seven CreateSmart Young Design Talent Award, four CreateSmart Young Design Talent Special Award, one HKDI Young Design Talent Award, one PolyU School of Design Young Design Talent Award, and three candidates receive the Young Design Talent Special Mention Award. Since its debut in 2005, 90 candidates have received the financial sponsorship for overseas experience, opened a new chapter in life, and explored a global design perspective. This important platform recognises promising local young design talents, aged 35 or below, and serves to maintain the city's competitiveness and consolidate its role as an Asian design hub.

### **The Awards Publication: Design for Asia: DFA Awards 2016**

A good design is the mainstay of creative economy, and a solution to social issues as well as a vital element for improving people's lives. The Awards Publication, "Design for Asia: DFA Awards 2016" (ISBN 978-988-13863-2-8) introduces the design thinking behind each of the winning projects and winners in 2016, is available for public order at [www.dfaawards.com](http://www.dfaawards.com).

More information about the winning projects at YouTube or Facebook by searching: DFA Awards.

## **4.**

### **Human rights museum wins international award for inclusion**

CMHR in Winnipeg recognized for 'outstanding contributions towards building an inclusive world'



*The Canadian Museum for Human Rights has won an international award for being accessible. (Canadian Museum for Human Rights)*

The Canadian Museum for Human Rights has won an international award for creating a place for people of all abilities.

The Winnipeg museum was given the Gold Award by the International Association of Universal Design at a ceremony in Nagoya, Japan. The International Association of Universal Design promotes the creation, through products and services, of a society where more people feel comfortable living.

The human rights museum was saluted for its efforts in wayfinding and physical accessibility, exhibition design, visitor services, public programming and interactions with both digital and non-digital content.



*The Canadian Museum for Human Rights was recognized for its efforts to create a rich museum experience for people of all abilities. (Canadian Museum for Human Rights)*

The award is presented annually for "outstanding contributions towards building an inclusive world where everyone can live together comfortably and without barriers to participation in daily life, regardless of ability, age, gender, ethnicity or other factors," a news release says.

"We committed to a 'design-for-all' approach at the earliest stages in our development, and our standards continue to evolve as we work with the disability community and our visitors, learning what works and what doesn't," said CMHR president and CEO John Young.

"Being internationally recognized helps build awareness and sensitivity across our entire industry, which can help improve accessibility standards everywhere."

The CMHR will highlight its inclusion and accessibility during events for International Human Rights Day on Saturday.

Demonstrations of assistive technology used by people who are blind or non-verbal, a guide dog presentation and performances by a deaf mime troupe and an all-abilities dance group are among the things that will be featured.



Sign-language interpreters and touch-signal intervenors (who assist people who are deaf-blind) will be positioned throughout the building.

*(Source: CBC News)*

5.

### **KORE receives International Design Award**



KORE by Kimball Office has been named a 2016 Good Design Award Winner by The Chicago Athenaeum Museum of Architecture and Design in cooperation with the European Centre for Architecture, Art, Design and Urban Studies as one of the most innovative and cutting-edge industrial, product, and graphic designs produced around the world.

KORE was designed by Swiss architect Daniel Korb and includes an expansive product offering, complete with elements for privacy, media integration, and solutions for sharing and learning. From benching applications to tables, private workspaces to collaborative gathering points, KORE brings balance to the workplace, eliminating barriers to help people stay better connected to their work and each other.



“At Kimball Office, we are fortunate to be working alongside some of the most creative designers and talented product engineers throughout the world. The team effort that it takes to receive such prestigious international design recognition is a testament to our progressive culture, and our brand’s steadfast commitment to design excellence,” stated Wendy Murray, Director of Brand at Kimball Office.

For over seven decades since its inception, The Chicago Athenaeum continues to honor both products and industry leaders in design and manufacturing that have chartered new directions and pushed the envelope for competitive products in the world marketplace.

Each year the GOOD DESIGN Awards Program selects the most innovative and cutting-edge product designs from nearly 50 countries around the world. Dating back nearly 66 years, Good Design is widely known as the most exclusive design awards program throughout the globe.

Entries for design and innovation, sustainability, creativity, branding, ecologically responsible design, human factors, materials, technology, graphic arts, packaging, and universal design are submitted from Europe, Asia, and the Americas and awarded corporations represent some of the world’s most visionary FORTUNE 500 companies such as of Puma, Apple and the Porsche Design Group.

“This year’s historic 66th Good Design program,” states Christian Narkiewicz-Laine, Museum President, The Chicago Athenaeum, “recognizes the work of thousands of designers and manufacturers worldwide who have successfully undertaken the design challenge to produce the best and most outstanding design products across the globe to our large and expanding global consumers.”

*(Source-Dubois County Free Press)*



## Programme and Events



Legnani. Graphic Design: Groupa Ee

FARAWAY, SO CLOSE  
25th Biennial of Design  
Ljubljana, Slovenia  
25. 5.–29. 10. 2017

The 25th edition of the Biennial of Design in Ljubljana is set to strengthen its role as an interdisciplinary collaborative platform where design is employed as a catalyst for change.

BIO 25, under the title *Faraway, So Close*, will be curated by Angela Rui, a Milan- and Rotterdam-based design critic and curator, and Maja Vardjan, curator of Museum of Architecture and Design (MAO).

In line with their focus on the humanistic side and expression of design, they will use the Biennial to decode through design the effects of environmental changes, asset migration, and reactions to the systemic crises.

In the face of the total failure of the theory of Positivism, we are now forced to confront the crucial and still largely hidden meaning of the consequences of “post-modernization”, for which the city seems to have lost its authority as the territory where we look to find the source of quality existence.

Small changes are already taking place and gaining ground, and new inputs are slowly modifying our urban and rural environments. New frictions emerge out of the co-habitation of remote meanings and contemporary habits, as we look for new territories to signify, places to re-inhabit, ancient relations to re-enact, basic coexistences to re-imagine. Can this friction between distant conditions produce new scenarios for a different present time?

Along with the main subject-themes of the biennial, BIO 25 will de-centralize and will be interpreted as a shift towards new territories to be seduced by research and discourse, as well as by the idea of an event with which to produce knowledge. In the age of super information consumed in real time, the challenge of a biennial becomes increasingly closer to real conditions of everyday systems; to provoke and challenge the paradigms related to design and architecture through their pragmatic application, acting as a “permanent work in progress”.

Slovenia, in accordance with its geographical conditions, will perform as a paradigm to stimulate, discuss and test the status of this global shift.

SAVE THE DATE FOR THE 25TH BIENNIAL OF DESIGN

Open Call	12 May - 5 July 2016
Kick-off event	15 September 2016
Process	Autumn 2016 – Spring 2017
Exhibition	25 May – 29 October 2017

**FINISTERRA**  
**IV** ARRÁBIDA  
film art & tourism festival

**CONVITE**  
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Fundação Portuguesa das Comunicações em Lisboa

Carlos Sarrnedas, diretor do Finisterra Arrábida Film Art & Tourism Festival, a Fundação Portuguesa das Comunicações, a Câmara Municipal de Sesimbra e Arrábida Film Commission tem o prazer de o convidar para estar presente na Sessão inaugural da 4ª edição do Festival

organização

**Typography Day 2017**  
Department of Integrated Design,  
University of Moratuwa, Sri Lanka.  
**23rd - 25th Feb 2017**

# DESIGN EXPERIENCE

**DESIGN EXPERIENCE** is an initiative conceived by designers, made possible through designers and directed to designers.

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Typographic Culture

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Cultural Immersion Learning

### GROUP SIZE

12

### PRICE

### SPECIFIC DATES

January 2017

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 1070 Wien  
 Österreich  
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 E-mail: heidi.resch@designaustria.at

2015 endorsement by

**ico-D**  
 International  
 Council of Design  
 leading countries

**BEDA**  
 The Bureau of European  
 Design Associations

In Kooperation mit:

**aiap**  
 associazione italiana design  
 della comunicazione visiva

**alliance française des designers**

**ILLUSTRATOREN  
 ORGANISATION E.V.**

**BDG**  
 Attitude  
 Knowledge  
 Network

**CZECH UNION OF GRAPHIC DESIGN**







30 September - 2016

# UIA Awards 2017

The UIA Launch the 'Friendly and Inclusive Spaces' Awards 2017



RIAI Awards Administrator

## THE BERKELEY PRIZE 2017

Essay Competition  
Travel Fellowship Competition

### ARCHITECTURE REVEALS COMMUNITIES



1952 JEROME CORSEY PRIZE: CORSEY, Colonial California, U.S.A., designed by University for the Environment, U.S.A. (University of California, Berkeley School of Architecture, Planning Department)



2012 BOB BERRY: Stage of a new world of buildings, Pakistan (Photo by Steve Delaney)



2015 2015: In the heart of a new world of buildings, Pakistan (Photo by Steve Delaney)



2016 2016: In the heart of a new world of buildings, Pakistan (Photo by Steve Delaney)

#### ARCHITECTURE IS A SOCIAL ART

The BERKELEY PRIZE supports the study and teaching of the social art of architecture. The online, two-stage Essay Competition (in English) is open to undergraduate architecture majors in accredited schools of architecture throughout the world. The Travel Fellowship Competition is open to the Essay Competition semifinalists.

#### PURSE

Essay Competition: 25,000 USD; 5,750 USD first prize; Multiple prizes  
Travel Fellowship Competition: Stipend and airfare; Multiple prizes

#### 2017 JURORS



**Saranya Bagga-Mahia**  
Architect, Professor, Chandigarh College of Architecture, Chandigarh, India where she has conducted multiple collaborative student workshops focused on the examination of urban landscapes, environmental design and social issues; Internationally recognized figure in modern heritage conservation and urban social history studies of Chandigarh; and Member, BERKELEY PRIZE Committee.



**Mark L. Olfen**  
Architect (FAIA) and Planner, Professor, architecture and urban design, University of Oregon, Eugene, U.S.A.; Director, School of Architecture's Ph.D. Program and the Urban Design Lab; Director of the International Association for the Study of Traditional Environments (IASTE); Principal of The Urban Collaborative, LLC, Eugene; and author of America Town: Building the Outposts of Empire.



**Omar Khattab**  
Architect, Dean, College of Architecture and Chair of the Department of Architecture, Kuwait University; Responsible for major design projects including the Care Centre for the Mentally Disabled and the Kuwait Autism Centre; elected representative on the managing board of the IBSA Gulf Chapter; and co-author of Cities in Transition: Transforming the Global Built Environment.



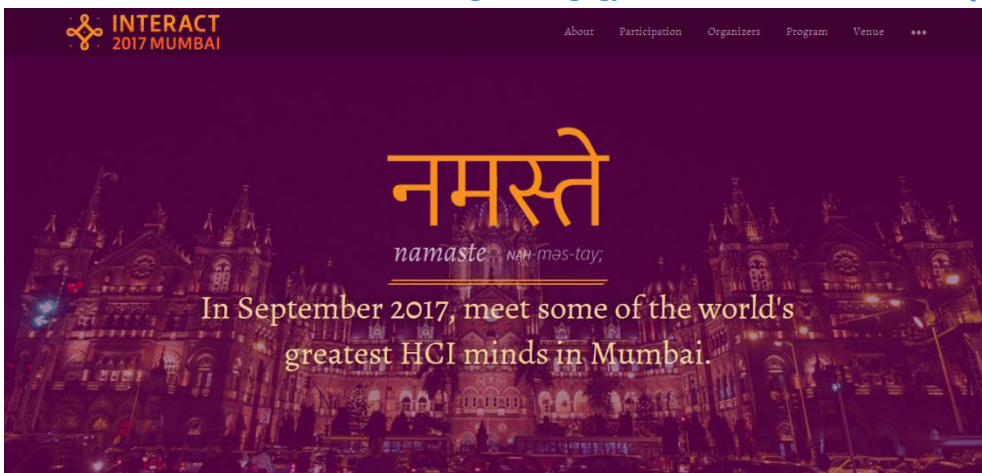
**Faig Men**  
Architect, former student, teacher and BERKELEY PRIZE Associate Teaching Fellow, Statek University, Palestine; current Fulbright scholar at the University of Michigan, Ann Arbor, U.S.A.; studying the role of the built environment under writer colonization in Palestine; Second Prize, 2012 BERKELEY PRIZE Essay competition; and Member, BERKELEY PRIZE Committee.

FOR MORE ONLINE: WWW.BERKELEYPRIZE.ORG



‘Reimagining Aesthetic Unfolding – From Conditioning to Awakening’

2nd International Conference on Design Pedagogy and Contextual Aesthetics (ICDPCA)





# Job Openings

## 1. Job Opening

Rean Cloud is looking out for 'USER EXPERIENCE DESIGNER' and 'UI DEVELOPER' at Pune office with 4-6 years of experience.

### UX Designer

- Expert user of design and presentation tools, especially Axure and PowerPoint.
- Flexible and open to adopting/learning new tools as may be relevant
- Strong understanding of information architecture, interaction design principles, component patterns, etc.
- Exposure in designing mobile interfaces
- Experience collaborating with geo-distributed multidisciplinary design, engineering, quality, research, etc. teams as well as external firms to evolve product requirements into compelling and usable design experiences
- Ability to communicate and present ideas and details from a interaction design perspective to internal and external stakeholders
- Must have strong presentation, communication, interpersonal, and design thinking skills
- Must have 4-6 years of relevant work experience and a portfolio

### UI Developer:

- Deliver best-in-class HTML5/CSS3/JQuery front-end code across a broad array of interactive web and mobile projects.
- Possess an advanced knowledge of web and mobile UX/UI; adhere to and extrapolate complex design systems and apply to coded pages, screens, and states.
- Develop and test across multiple browsers, platforms, and devices, including smartphones and tablets.

- Understand when mobile web apps are appropriate as opposed to native applications.
- Have experience with Standards-compliant code
- Integrating HTML/CSS into JAVA
- Work with client services, sales, and the design team, and manage time across multiple projects and tasks in a deadline-driven, team environment.
- Participate in discussions with clients and team members about technical best practices and help teams identify optimal technical solutions.
- Understand Agile methodology and instill best practices into the process.

Please connect with me if you or your friends are interested Neelam Dhanani <neelam.dhanani@gmail.com>

## **2.Job Opening**

We have an opening for Senior UX Designer position in Kuliza. This role will be responsible for maintaining quality standards of UX deliverables and mentoring junior UX Designers. I have attached the JD with this email.

Those interested in this role or have any questions, feel to reply [anindya@kuliza.com](mailto:anindya@kuliza.com).

To learn more about Kuliza feel free to visit our website. [www.kuliza.com](http://www.kuliza.com)

## **3.Job Opening**

MathWorks India is hiring a Principal UX Specialist in the Bangalore,India office.

### **Responsibilities**

You will be responsible for leading user-centered design activities related to MathWorks products and/or Web applications, working with development teams to follow a user-centered design approach as you work collaboratively to brainstorm and design innovative solutions to complex problems.



- Make recommendations to team members about which usability methods to use to answer their questions about users and design directions based on projects' needs, goals and constraints.
- Work closely with team members to conduct user research, identify pain points, develop user profiles and create task lists.
- Contribute to requirements and design documents.
- Collaborate on paper and functional prototypes.
- Run usability tests, conduct interviews and site visits, organize surveys, and perform other usability assessments.
- Help the teams interpret and understand user feedback, and provide input for design decisions based on that feedback.

#### Minimum Qualifications

A bachelor's degree and 12 years of professional work experience is required.

More details and job description here:

<https://www.mathworks.com/company/jobs/opportunities/16595-principal-user-experience-specialist>





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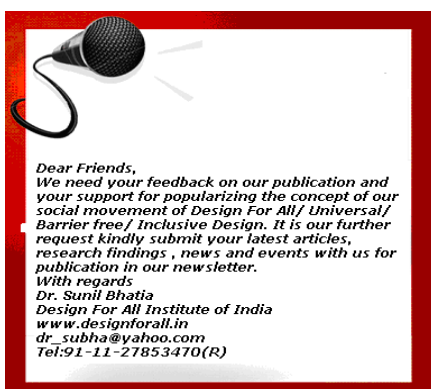
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## Forthcoming Issues

### **January 2017 Vol-12 No-1**

Gerhard M. Buurman is the founder of a couple of programmes, initiatives and institutes at the Zurich University of the Arts (ZHdK). Hochparterre called him a steady initiator and Bernhard Bürdek commended his distinguished ideas on the university level. As theorist and vibrant researcher he worked in international groups at the ETH Zürich and Harvard Law School as a practitioner. He will be the Guest Editor.



### **February 2017 Vol-12 No-2**

Jim Harrison is a Lecturer at the Cork Centre for Architectural Education in Ireland, and has long experience of teaching, research and publication on aspects of Universal Design and user-friendly design for ageing as well as in integrating these topics into the architectural curriculum. He also has been a supervisor to PhD and Masters thesis candidates in related topics.



He has produced numerous publications on inclusive design related topics with over 50 papers and journal articles, a collection of which were successfully presented for his Higher Doctorate (LittD) at the University of Sheffield. Whilst teaching in Singapore (1984 – 2002) he became involved in UN ESCAP 'Training the trainers' accessibility workshops in the Asian Pacific Region, in which he is still active. Amongst many other achievements he contributed a section for the Singapore Access Code on the needs of older people and, as a UN Expert Resource Person, continues to participate in projects on Universal Design promotion. He will be the Guest Editor.

### **March 2017 Vol-12 No-3**

Bonollo, Emeritus Prof. Elivio Emeritus Professor, Industrial Design Faculty of Arts & Design ,is one of Australia's leading industrial design educators and researchers. In 2008 he was conferred with the Honour of Cavaliere by the President of the Republic of Italy in recognition of his collaborative work in design and



education. He is emeritus professor of industrial design at the University of Canberra (UC), and recently visiting professor in the School of Design and Environment (2004 -2007), and the Department of Mechanical Engineering (2007) at the National University of Singapore (NUS) will be the Guest Editor.

### **April 2017 Vol-12 No-4**

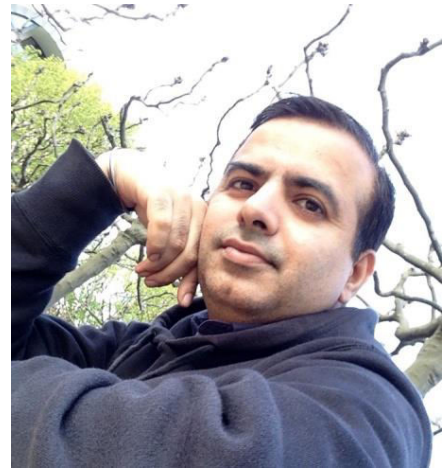
Dr. Sandeep Sankat Associate Professor, Department of Architecture , School of Planning & Architecture, Bhopal India will be the Guest Editor.





**June 2017 Vol-12 No-6**

Dr. Gaurav Raheja Associate Professor, Department of Architecture & Planning Joint Faculty, Centre for Excellence in Transportation Systems Indian Institute Of Technology (IIT) Roorkee, Uttarakhand State, India will be the Guest Editor



**July 2017 Vol-12 No-7**

Mark Watson was chosen from an international field of Designers to participate in the International Society of Councils of Industrial Design Interdesign Workshop, a two week workshop looking at Smart City solutions to social, environmental and economic problems in Mumbai .



Mark has a 15 year long engagement with Design in India presenting at leading Design Conferences on Design Thinking and Experience Design and is currently adviser to the Indian Design Festival.

Mark Watson MDIA Managing Director Design Providence  
<http://www.designprovidence.com.au> Lead Partner Design Thinkers Group  
Australia <http://www.designthinkersgroup.com/>

Co-Founder Indo Australian Design Research Alliance <https://www.>

