



## Cumulus Mumbai 2015:

In a planet of our own - a vision of sustainability with focus on water

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## Design and Sustainability Paradox

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**Abstract:** In this paper we describe the Rapid Technological Developments and globalization have pushed the world closer than ever before. Yet we cannot deny the fact that the feeling of distance between people is never so strong. From the micro level creation of leak proof tap at home to the macro level prevention of water pollution on earth; the designer can play a crucial role in sustainability, especially with regards to the primary life source, water.

However, for design to meaningfully intervene, we must have a broad and deeper understanding of human development and its relation with sustainability.

Let us view development. I venture to say that it is the developed world which needs development in real sense. It is so because the Industrial Development is not the real development. It is suicidal development.

"The promise of conventional development is that by following in the footsteps of the "Developed Countries" of the world, the "Under Developed countries" can become rich and comfortable too. Poverty will be eliminated, and the problems of over population and environmental degradation will be solved". (Helena Norberg - Hodge). There is inherent flaw in this promise because this present development is based on one third of the world's population consuming two thirds of the world's resources. How can this be sustainable? Furthermore, this also meant that one third world is polluting the rest by generating two thirds of the worlds waste. This is the reason why earth summits to protect global environments failed. Gyelomg Paldal (1990) said that "we (in developing countries) are still reaching for the sky. In the developed countries people are coming back down and saying "It is empty up there".

Sadly; the developing world fought and freed itself out of the political colonization but it is now firmly in the grip of globalised economic colonization.

The waking tigers and dragons (India and china) are in an invisible colonisation cage and roaring without noticing their cage. Within this context we must view Design and then we find the “Design and sustainability paradox”.

To design is to increase choices, create new products and new messages for more consumption. The world today is getting overwhelmed by products, signages and communication clutter. An increased consumption makes increased depletion of limited resources and also increased waste and pollution. The main victim is water.

It is thus imperative now to think and reorient design towards sustainability. This paper is about such rethinking.

Mahatma Gandhi always used only one lota of water for his morning ablutions though he stayed next to Subarmati River which was full of water. He said that if he uses up more water than he needs, those people down stream will be robbed of their share. We all share one earth and everything is connected, increasingly so, Most of the people today are not sensitive to this connectedness. Design can correct such mindset.

Take a most common example. It is a prevailing custom at homes and restaurants to offer a glass of water to guests. We do not realise that every one glass we use to drink, utilises eight glasses of water for its cleaning, wiping, drying and maintaining, not to mention the water used and disposed in manufacturing the glass. So, the design should be oriented towards exploring methods of drinking with minimum or preferably with no artefacts.

Sustainable design therefore should be:

In place of designing more products and more messages, create better ways of living well and understanding each other. In place of designing more phones and more talks at cheaper rate, promote better bond between people. In place of designing more varieties of dishes and more courses of meals, create more water saving practices and more quality.

Design has to motivate sustainable life style changes at home and at work place. It should motivate people to not only reduce water use but also harvest, recycle and reuse water at individual level. It will have multiplier effect. Water is life source and better water use is better life, by design.

***Key words: Rethinking Design; Suicidal development; Design paradox; Connected world; Economic Colonisation.***

## Introduction : Growing Small

The paper on which you are reading this text (if you are) is not just a paper, it is (3 gallons) ie 12 liters of water, the amount of water required to produce a single A4 sheet of paper, not counting the water required for its packing and distribution. I can say this with some conviction and perhaps with some authority, because I started my professional life as a water supply Engineer in the giant J.K paper mills before I tumbled into Design. Every bit of paper guzzles water and many designers are not familiar with such indirect water consumption in products of daily use! Since most of us are familiar with problems with direct water consumption, I attempt here to focus designer's attention mainly on the relatively unfamiliar water consumption issues, and the ensuing paradoxical dilemmas in such situations for designing.

Design has to necessarily operate within the technological and social contexts of the present. Today, the unprecedented speed of technological developments has pushed the world closer than ever before. As the world grows smaller, the previously isolated areas and unconnected people on the globe have been inevitably brought together. We are thus compelled to share mental and physical resources, as well as issues. One such basic issue is sustainability of water, the primary necessity of life.

That the Design plays crucial role in addressing the issue of water cannot be overstated. Conventionally, Designers address the issue such as water in two major ways.

First, by designing innovative devices and systems for a) Saving, using and conserving fresh water; b) Recycling waste water and c) Desalination of sea-water. Second, by designing buildings, spaces, devices and systems to harvest, collect, and preserve water.

True sustainability however is more than the linear way of finding a solution to a problem. It is about creating a cycle which can permanently and perpetually maintain itself. Linear path has an end, while cyclic path is never ending. This requires a broad and deeper understanding of the water consumption pattern in the context of human development and the role of design within that context.

## 2. It is the Developed world that really needs development

The popular notion of "Development" is in terms of economic development which is a result of industrialization and Quantitative Production. But is it sustainable? Is such model adaptable equitably by all countries?

In the book "Ancient futures" Helena Norberg-hodge (1991) wrote that "The promise of conventional development is that by following in the footsteps of the "Developed Countries" of the world, the "Under Developed countries" can become rich and comfortable too. Poverty will be eliminated, and the problems of over population and environmental degradation will be solved". She pointed that there is inherent flaw in this promise because this existing development is based on one third of the world's population consuming two thirds of the world's resources. How can this be sustainable? Furthermore, this also meant that one third world is polluting the rest by generating two thirds of the worlds waste. This is the reason why earth summits to protect global environments failed. Gyelomg Paldal (1990) said that "we (in developing countries) are still reaching for the sky. In the developed countries people are coming back down and saying "It is empty up there". The developing world fought and freed itself out of the political colonization but it is now sadly and firmly in the grip of globalised economic colonization, what I call as Cocacolonisation.

Viewed this way, it is the developed world which needs development in the real sense. It is so because the Industrial Development is not the real development but a suicidal development in the long future.

Contrary to the popular belief, many problems of the developing countries today are to a great extent the consequence of colonialism followed mindlessly by the misguided and imitative development policies. The awakened tigers and dragons (India and China) are in an invisible colonization cage and roaring without noticing their cage.

### **3. "Design and Sustainability Paradox"**

To design is to increase choices by creating more and more new products or improving existing ones for more consumption. Desires for buying more things are created and fuelled by powerful persuasive communication devices. Vance Packard pointed long ago how designers make people buy 'what they do not need, with the money they do not have'. As a result, the world today is getting over-helmed by products, signage and communications, making an enormous clutter.

An increased consumption makes alarmingly increased depletion of limited resources and also more alarmingly increased waste and pollution. Almost all production and disposals involve use of energy and water. A cursory look at the skyscape of any city or the interiors of any super market complex will wear us down with advertisements and objects. In India, not just the skyes and interiors but even the houses are shrouded in advertisements of soap, Cement or the like.

It is thus imperative now to think and reorient design towards sustainability.

#### **4. Closer but not together**

Changing human attitude towards use and disposal of water is crucial for sustainability. Almost all the waste happens, not by choice, but by feigned compulsion. We use and discard paper because it is cheap, without knowing or without giving enough thought to the water used for its production, nor to the energy used for its disposal, nor to the pollution caused to the environment. Not having the far sight and wholistic view, we simply do not bother to explore other more sustainable ways of communicating or ways of preserving knowledge. Let me give an innocuous example. It is the popular custom in India to offer a glass of water to a guest at home or to a customer in a restaurant. Many of us do not realize that each glass of water we use to drink utilizes eight glasses of water for cleaning; washing, drying and maintaining, not to mention the water used and disposed in manufacturing the tumbler. The traditional systems of drinking and eating directly with hand, or using a bio-degradable banana leaf where all the dishes are served and replenished instead of many courses and many dishes and cutlery ; have almost disappeared.

There is also tremendous pressure on people, especially in India, to conform. It is nowadays considered rude not to offer "bottled water" to a guest or for you not to drink. Only poor people drink "regular" water. The powerful advertising by water bottle brands conditioned our mind in such a way.

#### **5. Globalised but without the feeling of one earth:**

The other impediment to sustainable resources is the isolated individualism as opposed to ancient collectivism and to the feeling of one earth (Vasudhaiva Kutumbakam). This individualism is promoted ironically by the same technology which brought people closer.

History tells us that Gandhi, the great soul, managed to use only one lota of water to complete his morning ablutions in spite of staying on the banks of the (then) full flowing Sabarmati River. He did so because he was concerned about the water needs of all the people downstream! Gandhi did by example what designers failed to do by design.

In contrast to Gandhi who said “the world has enough for every ones need but not for every ones greed” development is projected as based on the principle of “greed is good and greed is motivating factor for development”. It resulted in the accumulation by few and deprivation of many. While water and air are basic necessities of life, few people with money are cornering them. What about people who cannot afford to buy bottled water daily, in a country where the average daily earnings of a person is approximately Rs.50 and 3 liters of bottled water prescribed per person per day costs around Rs.60? Are we concerned about those poor people who cannot afford?

Earlier the village communities used to take care of the repair and maintenance of the wells and lakes which are life lines for farming and living. But now, the villages became vote banks in the process of development and self care by the community has been replaced with dependency on government and its inevitable corrupt system.

Unless a deeper awareness and an attitude of holistic thinking are created by persuasive communication design; solutions will not become sustainable.

#### **6. The short sighted addressing of the shortage:**

In some Indian states when there was shortage of power, the government made cuts in the daily power supply. People promptly bought converters and stored power and used it, thus negating the whole point of a cut. Converter manufacturers made money but no real effect in reducing consumption. It is the same case with water.

We are driven to “buy” water instead of harvesting or saving water. This means not only one needs money to buy but also an agency for supply as well as to ensure its hygiene. We are made to become dependent on an outsider as well as not sure of the adulteration. More importantly, consumers are not made aware of the hidden factors such as pollution caused by the bottling factory, by the transport, problems of plastic waste and so on.

All these issues require design intervention in various ways, from public communication to Product/Policy design.

## **7. The Emerging role of Design: Importance of the intangible**

So far, throughout the history, design was a creative activity that was applied to the creation of physical environments and physical media. But today there are new challenges emerging now which are making this role change drastically.

The nature of design is synthesizing. This in near future can become a major strength of design in the integration of different teams in a company and different people in the society.

The emerging role of design is to creatively intervene, innovatively disrupt any human Activity, to revolutionize it with better strategies. Its role now is that of applying a new idea or thinking process to a service or need than offering a new product.

The emerging design approaches are now thinking based and increasingly being used to manage change, to develop appropriate attitudes and to devise strategies.

Design is moving from creating products to innovating process. Intangible areas such as interaction design, user experience design and service design are rapidly growing in importance. These will change the role of design shift from water consuming or energy using physical artifacts to intangible processes which do not pollute and which consume minimum or no materials. For example, Paper currency use in present times had drastically come down with the use of on-line transactions and bill payments. Transport services such as 'Uber and Ola' manage operations almost with no physical building or equipment. So is the case with the successful service ventures such as 'Flipcart or naukri.com'.

Design is becoming a culture of innovative ideas and delivering an experience than an artifact. Its reach is extending from production to business, from tools for education to approaches of education, manufacturing industries to service industries such as tourism. Already, 60 percent of Indias GDP is coming from services and this percentage is increasing. Design as a thinking process is encompassing every field of human endeavor.

Design community thus can be optimistic about the emerging design approach, aided enormously by the digital technology thus saving the world from resource crunch, including water deprivation. The quicker the designers shift to the intangible design, better the earth and mankind for it is more sustainable.

#### **8. Conclusion: A calculated design change for future**

Designers must be aware of the hidden consumption patterns of water in every product and service we use. They can then promote awareness in all levels of society and industry. This is as important as the visible consumption patterns for action to follow. This obviously requires changes in life styles for which design can play vital role in Persuasive communication.

The new role of design is a shift from tangible environments to intangible ones, from touch and feel to thinking and to strategizing. New digital technology enables us this new role, and empowers us in making the earth sustainable.

A general promotion of fellow feeling, collectivism and long term futuristic vision is imperative in today's rapidly shrinking global village.

Changes in design or in other spheres, to be really positive, ought to take place in an appropriate context for a true and sustainable development. The importance of this can never be over stated. However, it is necessary that every country must define its own appropriateness of development depending on its own resources, water included, socio-economic conditions and political situation.

Water is an increasingly vital resource for any country.

#### **9. References:**

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