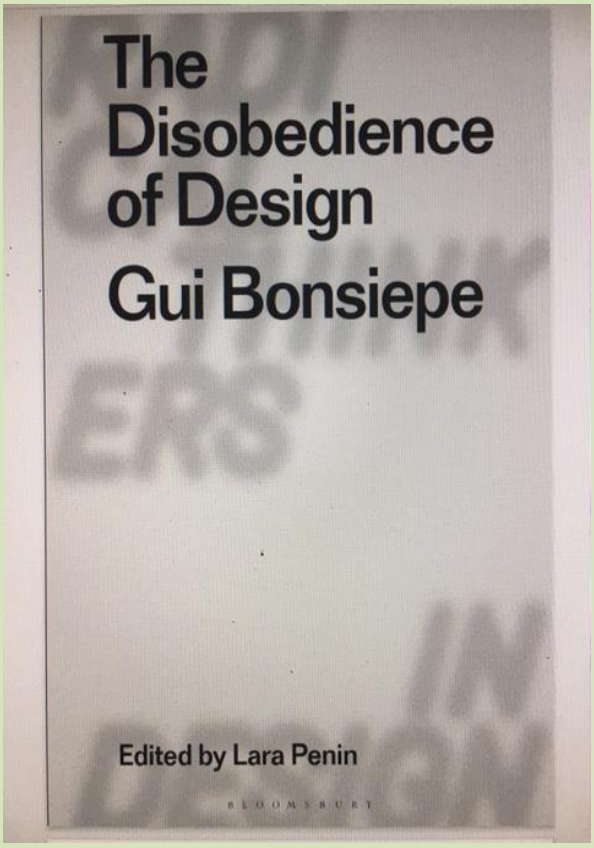

Disobedience of Design Gui Bonsiepe

book review by a g rao

Introduction

The very title is provocative. What is the ‘disobedience’ about? It is about the legitimate position for ‘design’ and the responsibility of the profession to play its role as an agent of ‘Social change’ for a better Society! Gui Bonsiepe argues for ‘design autonomy’ in its specific domain and immanent intellectual space in other disciplines. Even as he declares himself as a ‘skeptical Optimist’ in an interview, he talks of a utopian ‘continent of design’ to be explored in its intellectual dimension.

The book, Disobedience of Design-Bonsiepe, edited by Lara Penin with essays from others, is brought out in the series, ‘Radical Thinkers in Design’. We must congratulate Lara Penin and her colleagues for bringing out this volume which presents the lifetime work of a ‘living legend’ of Ulm philosophy ‘Gui Bonsiepe’, through a selection of forty of his essays,

interviews, and projects written between 1965 and 2018. No doubt it is a landmark in the History of Industrial Design! The book needs to be present in every library in the institutes of higher learning as well as on the tables of design intellectuals!

Ulm School and Prof.Bonsiepe have a special significance for India.

Bonsiepe was a core theoretician along with Thomas Maldonado, his mentor at Ulm in the 70s. His visits to IDC and NID gave much-needed back up to adopt the Ulm model in both places. His engagement with peripheral countries like Chile, a report for UNIDO, and a candid 'criticism of Victor Papanek's book 'Design for the Real world' in a 'Socio-Political context' and 'Victor Papanek's defense reported in the book' are exciting to read for design enthusiasts! Bonsiepe in his later interview insists on the need for reconsideration of the inevitably political character of design which must play a role compatible with times to address ecology. In this context, 'Consumption and Sustainability' give a challenge and opportunity for design in India, trying to move into ce ntre from periphery, with its large youth population on one hand and traditional skills rooted in elder generation on the other hand.

Bonsiepe's advocacy for Design Research to address new culture of Learning in Schools with new capabilities in net/web assisted audio visual domain is significant for educators, policy makers and politicians. Not only it can build a wall against what he calls "porridge speculations" of New Media but also a new 'Future' possible!

His years of work in Latin America, which the editors bring out comprehensively in the book, has many insights useful for India. His major contribution in later years 'Interface' applicable to all artefacts, digital and physical, in the framework of ulm philosophy is in urgent need to be absorbed and further developed in India and elsewhere. In this context the present volume is important for Indian design community.

I was fortunate to be closely associated with prof.Bonsiepe, during his brief engagement as UNDP consultant in India for 6 weeks in1982! The present review with further elaboration of the items mentioned above is with the Indian spectacle in the mind.

1.0 Ulm model which laid 'foundations of design' in India

Ulm model was adopted in NID(National Institute of Design) and IDC(Industrial Design Centre), especially in Industrial design steered by prof. Kumar Vyas and prof.Sudhakar Nadkarni. Kumar Vyas a trained, practicing designer in England was recruited by NID and sent to Ulm for 10months to study and absorb Ulm model. S.Nadkarni studied for 4years at Hfg,Ulm after qualifying in commercial art at JJ school of Art, Mumbai. He was at NID for a year as a designer/teacher and later joined IITBombay as 'Faculty in Charge' (a special designation created for IDC), to introduce 'design'.

For NID, spirit of Bauhaus with its non-traditional expressions and systematic ways of treating elements of design like colour, line and composition had significance to create new

identity for ‘design’, different from schools of Fine Arts in India. Hannes Mayor’s thought link which moved into Ulm, as Bonsiepe elaborates in his interviews in the book, had a relevance to NID and IDC, with the Indian need for Industrialisation with small and medium Industries. ‘Doing culture’ was lacking in Indian school and college education.

Both NID and IDC, had workshop and prototyping facilities to make ‘working with hands and solving problems in action’ realistic. ‘Practice to Theory and Theory to Practice’, an Ulm trait, was also emphasized by Charles Eames in his India report for NID. Eames was in Hfg-Ulm in1958 as a guest faculty much before he wrote his ‘India Report’, is little known.

NID, as an institute under Ministry of Industries, had a mandate of Design practice right from the beginning. In the initial PG programme students spent considerable ‘time’ on actual projects undertaken by Faculty. This had a great bearing, as Engineering education in India is fully academic and far away from Practice. ‘Building things’ was not supported. When I joined NID with an engineering degree as a first batch student, I relearnt my engineering in a designerly way! I and my classmate V M Parmar, started Vacuum forming and FRP moulding facilities at NID, which helped me to initiate both these facilities at IDC, IITBombay as in-charge of plastic studio!

2.0 Bonsiepe’s role in establishing ‘design’ in India

2.1 Design in Institutes of higher Learning.

IDC got a foot hold in IITBombay after a decade when its diploma programme culminated in to master degree M.Des. Teachers being practitioners was new to IITs. The freedom to take consultation projects by faculty at IIT, helped to introduce ‘Design Practice’ in the country by taking projects from Industries. Process knowledge gained at NID was of great advantage. I introduced ‘Vacuum forming’ to an Industry when I redesigned a 16mm projector. 3 Boilers we designed were highly appreciated by the Company as well as by IIT director who was a mechanical engineer. Starters designed for ‘Crompton’ and ‘Siemens (India)’ were quite successful. Top political leaders like PM Indira Gandhi, president Julius Nyerere of Tanzania, Indian president Dr.Abdul Kalam were shown IDC designed products! Faculty working on the projects in the design school, which can be seen by students, brought a new culture of learning and thinking in IITBombay.

Prof.Bonsiepe’s stint as UNDP Consultant in 1982 became a booster for us in many respects. He gave four talks, one in IIT Bombay and another in IISc Bengaluru to faculty of Science and Engineering. His third talk was in Delhi to ‘State Trading Corporation’ responsible for exports and 4th in Chennai to ‘Owners of Small Scale Industries’! These talks from a ‘German expert who worked in Chile’ had their impact.

IDC took full advantage of his presence. We planned an ‘IDC-NID, 3day-discourse on design pedagogy’ during which faculty from IDC and NID presented what they were teaching. Related issues like how to deal with Indian culture, symbolic expressions, etc., came into

fore! Such events of informal, deep discussions remain 'unique' and 'rare'. Prof .Bonsiepe's very presence in addition to his critical feedback had catalytic effect!

In 1989, a report was submitted to MHRD (Ministry of Human Resources and Development) on 'Design as a strategy for economic development' by IDC, with the experience gained in responding to prof. Bonsiepe's report: 'Design for Development of 1973'. It resulted in the Ministry's policy to start 'design programmes' in institutes of higher learning. Consequently, IISc, IIT Kanpur, IITDelhi started Mdes programmes. IITGuwahati started B Des.

Eventually IDC expanded into 5 branches. With increasing demand for Phd as a qualification for 'Faculty positions', IDC started a Phd programme in Design. After becoming a department named IDC-School of Design, a B Des programme was started in 2015.

2.2 Creating new content for design Pedagogy in Ulm framework

Both IDC and NID started developing pedagogic content in the decade after 1970 as their educational programmes took off!

Ulm's goal of 'Objectifying education and transforming design into a teachable learnable activity' took shape in IDC and NID to a great extent.

Kumar Vyas understood Ulm philosophy very well. But the gaps existed in articulating theoretical background behind. It was more of tacit knowledge translated through similar tasks, sometimes quite innovative. For example, Kumar Vyas created a 'task' for us to come out with alternative forms to strengthen a sheet metal by pressed/drawn projections of 10mm, in an area of 1mX1m! An aesthetic, geometric response was expected. Such metal sheets were used for water tanks, etc. We learnt how deformation of thin sheet can increase its structural stiffness!

At the same time when I confronted Kumar Vyas, on 'why we are doing a radii manipulation task in basic design', his answer was, 'Why are you so sceptic?'. He was not equipped with a 'theory based' explanation. But his feel for radius was astonishing. Few 'radii' he added on my mock-up model of new design of a 'door hinge', magically transformed the look of the product! This contextual input had a measurable impact on my learning! I could build the connections while teaching at IDC and see the importance of, abstracting 'Radius' from 'moulded industrial processes' for 'mediated learning of contextual industrial aesthetics' coming from Ulm. I could extend this mode of approach to 'expressions' as an objective language of 'Form', different from 'free personal expressions' emphasised at Bauhaus.

2.3 Bonsiepe's mentoring role for Design Education

My association and discussions with prof.Bonsiepe when he was at IDC as UNDP expert played a significant role! I picked up a way to create a 'method to teach and learn'. For IDC PG students, he gave a problem of redesigning a door hinge, typically used for houses in India. Students, not familiar with such problems in engineering or architecture were

struggling to come up with solutions! They were making some sketches! Then prof Bonsiepe asked them to visualize the hinge 10times bigger and also make quick 3D models. This jolted them and triggered their imagination (there was no 3D software at that time). I quickly learnt the importance of creating a surprise element to involve students. Much later I realised that Alex Osborne's brain storming transformations Magnify, minify etc., could be conveniently used as a 'tactical approach' even in basic design tasks. This tacit mentoring helped me a great deal to teach graduate engineers who needed 'complexity' as a challenge to get engaged. I was able to take ahead this 'mediated learning in basic design' with series of cube tasks I created, to develop 'imagination and aesthetic response' for problems with complex constraints. Such inputs paved the way for success of IDC students in the Indian Industry due to their ability to deal with complex issues and come out with 'design solutions' which were easy to produce, cost effective yet user friendly.

Prof .Bonsiepe continued this mission as educator and mentor in Latin America.

As Lara Penin points out in the book, 'Bonsiepe's idea of Design education itself is an idea of emancipation'.

In an interview with James Father in 2002 (reported in the book), Bonsiepe says:

'So, in summing up, my approach was to reorient young people who did not find answers to their questions in their own context, to provide them with design tools and to propagate industrial design as an autonomous activity separated from art and architecture, and engineering. And not only in Argentina, Chile, and Brazil, but also in other countries such as Mexico and Cuba, where I spent two months in 1984, again under the contract of a United Nations consultancy job, in order to help get their ambitious project of the National Office for Industrial Design into shape.'

2.4 Creating a platform for 'Design Discourse'

Prof Bosiepe had said in 'Milan interview (1992)', "What characterizes the peripheral world is the lack of a design discourse. That is why these countries have not, so far, had a future—for the future is where design unfolds…."

IDC put up its first public show in 1975, with an exhibition 'Products for People' in Jahangir art gallery, a cultural City Centre. Faculty works and student projects exhibited got prime attention in Media as scores of public visited the exhibition. SIDI (Society of Industrial Designers of India) formed in 1972, also participated in the exhibition with member's work.

1980 onwards, IDC created a culture of organising yearly seminars, which were new to design community in India at that time. 'Ulm and After', Arthaya(Semantics), to name few, had International experts like Gui Bonsipe, Sugiura Kohei, Nigel Cross, etc., who came as 'invited speakers'. Indian Designers and Teachers also made presentations. Live, vibrant interactions took place in the specially built IDC auditorium. Along with this IDC started putting up yearly degree shows. The seminars and exhibitions at IDC attracted attention of

other departments in the Institute, sometimes causing envy! But IIT authorities were always supportive as these gave visibility and international standing to IITBombay!

Foundations were laid for a 'design discourse' balancing issues of Theory and Practice!

In later years IDC as a matter of course adopted the general model of 'Science and Technology academic get-togethers for its own seminars and degree-shows, inheriting a less interactive format, where formalities prevail and social gatherings of select groups become only means of informal exchange of views.

2.5 Design Research

Prof Bonsiepe lays great emphasis on 'design research' to create knowledge specific to design. He clarifies that 'Hfg did not focus on individual objects, but preferably on object systems and design programs'. Bonsiepe consolidates this position after 30 years in the articles like 'Relevance of Ulm School of design Today (2003)'. Phd scholars and educators in design can gain from Bonsiepe's insight: 'That in future a form of endogenous design research will be pursued that goes beyond its immediate application in the design process. This would create a pool of knowledge that field of knowledge still lacks. Designers should definitely be involved in this kind of research in order to counter the danger of other directedness in design discourse'.

2.6 Supporting Design practice in Industry

In spite of Institutional back up, students who joined Indian Industries had problems in the first decade. Often IDC trained designers were treated as engineers to help R and D heads or to execute their fancy ideas. There was a gulf between Marketing and Production in Industry. In-house designers being junior in rank had a problem to reach the top management except in companies like TATAs (as Ratan Tata studied Industrial Design in IIT Chicago). To address the problem at a strategic level, IDC started a 5 day programme called 'Expo ID' for exposing managers and heads of R and D to industrial design and visual communication. Faculty from NID were also invited to take few sessions.

IISc (Indian Institute of Science), a premier Institute in Science had difficulty to position Industrial Design which was taught in CEDT (Centre for Electronic Design and Technology), a centre started with Swiss collaboration. One IDC alumnus who joined as a designer had problems in functioning. We came up with a strategy of suggesting a short course for CEDT faculty by IDC, with Prof.Bonsiepe as a Lead faculty. This was readily accepted by IISc director.

Making an entry into the established structure of Power was an arduous task. Engineers trained in India with British culture were used to 'Dancing around the problems' (the famous phrase coined by Bonsiepe), rather than solving them. In the two decades after 1970, IDC and NID created a critical mass of well-trained graduates for Teaching and Practice. Today many of them head design departments and Institutes or their own studios and companies!

Trained in unique designerly atmosphere, initial batches of NID were 'not ready' to fit into Industries. Many started their own offices and worked as consultants. Both IDC and NID have done many projects for Industries and Govt at the Institutional level. A Project done by me and my team, EVM (Electronic Voting Machine) in late 80s stands out as a land mark achievement of IDC. It continues to be used in all elections till now! Rupee symbol in current use is designed by an IDC research scholar! Symbols designed at NID for Indian Airlines, State bank of India, Doordarshan are well known. Today graduates of both institutes are working as designers and faculty in leading positions in Europe, USA and other countries.

3.0 Professional bodies of Design-SIDI and ICSID

IDC provided a base for 'Society of Industrial Designers of India'(SIDI) which started in 1972. By 1975, it had 59(46 professional +13 student) members and participated in the exhibition 'Products for People' organised by IDC. However, SIDI did not have resources to pay ICSID membership. I happened to be the president of SIDI when I attended ICSID congress at Dublin in 1977, to present a paper on 'Realities of Real World'. Paul Hogan, Irish coordinator of the event, took me to ICSID professional meeting as his guest, which paved the way for SIDI to become a member with 2votes in institutional category with nominal fee!

UNIDO-ICSID meeting (1979) held at NID resulting in 'Ahmedabad Declaration', also continued in IDC, IITBombay due to the efforts of Prof.Arthur Pulos, president of ICSID and a lead adviser for IDC-UNDP programme! 'IDC-A decade of design Experience' was released during the last day of the meeting at IITBombay! This first significant publication on design with 'documentation of work' had an impact on design community which solely relied on 'exhibitions' as mode of public communication. As a chain reaction, NID started its own 'Publication Division' headed by ever energetic (late) M.P.Ranjan.

SIDI bulletins covered prof.Bonsiepe's (1973) report on 'Design for Development' in 3 issues.

NID also started supporting SIDI to give it an 'Identity' independent from academic institutions. NID, IDC, SIDI together made efforts to form a 'Design Council of India' with Govt support, which unfortunately did not succeed. SIDI could not survive in later years due to poor support of professional practitioners across the Country! Currently one professional group operating from Pune is active with its Yearly event called PDF (Pune Design Festival). 'India Design Council', a new initiative in recent years is yet to make its presence felt in the country.

In an Interview (reported in the book) with Gabriel Patrocinio and Jose Mauro Nunes in 2019, Bonsiepe, referring to his report of 1973, raises a provocative question relevant to Indian designers today:

'But as a professional body, designers should ask themselves if they were able to move to power centres where politicians and representatives of other professions—mainly

economics, finances, technology, management, lobbyists (not designers)—take the decisions. I ask: Where are the designers in this complex system?'

4.0 Design for Development in Peripheral Countries-India

Prof.Bonsiepe's unique experience in Chile and other Latin American countries as well as India by Ulm philosophy has resulted in unique contributions well brought out in the book.

Editor Lara Penin says: 'Bonsiepe focuses on the local industrial economy largely bypassing the cultural circuits. He connects straight with South American industrial base, specifically medium- size industry, as Ethel Leon describes, defining thus the industrial world as his medium. In his trajectory from Chile to Argentina and Brazil, Bonsiepe immerses himself in the industrial spheres in these countries and defines his own politics within them. He is convinced that the local industry is the key to self-sufficiency and autonomy. That's where his technical rationality fits perfectly, and becomes the engine of his politics for local development.

The book invites new readers to engage critically with Bonsiepe's texts and not to take them as one static body of work, but as a collection of texts that discuss different aspects of design and the world at different places and times.'

I will add some untold stories in the area and share my experience with bamboo craft and education of Children in India.

4.1 Tale of Two Stalwarts Victor Papanek and Gui Bonsiepe in India

In 1972, a severe drought in Maharashtra attracted attention of all in IITB. Participation in relief measures in villages brought us face to face with 'stark economic realities on the ground'. What I learnt at NID or taught in IDC looked far away from the socio political situation at village level. Intermediate Technology suggested by Schumacher and Appropriate technology coined in India offered hardly any role 'for professional design'. Victor Papanek's, rather heroic approach, reported in a design magazine caught our imagination. Then came the Bonsiepe's report 'Design for Development (1973)' written for UNIDO. Prof.Nadkarni was invited by UNIDO to discuss the report. IDC faculty, 3 of us Me, Uday Athavankar and prof.Nadkarni, discussed the report thread bare. I was assigned to make a write-up to assist prof.Nadkarni to participate in the meeting . We were greatly benefitted by the report as it assisted us to select student projects fitting into that theme, which are reported in the publication 'IDC- A Decade of Design'. Papanek's book 'Design for the Real World' did not make much of an impact in India at that time. Economic development was seen as a socio-political issue rather than a 'design issue', in the back drop of Gandhian approach. An article of mine in SIDI Bulletin on the topic caught attention of Paul Hogan who visited IDC in 1976/77. Consumption pattern of poor in India and little relevance of designing consumer products was discussed in the article! Paul Hogan invited

me to present a paper in ICSID Congress (1977). During that time, unfortunately, a letter addressed to Prof. Papanek by Paul Hogan came to me by mistake. I had great regard for Papanek and content of the letter which indicated that he was seeking support for 'Philip Award for design in developing Countries', did not bother me much. But Prof.Papanek was 'very uncomfortable' when we were introduced in Dublin. Later, when he visited India on an invitation from NID, I arranged his talk in IITBombay! Audience response was not as in the West, as they were unable to connect. Compared to this, Prof.Bonsiepe's works in Chile got lot of admiration when he presented them in 1982, in IITB and IISc, as audience were familiar with the politics which lead to fall of 'President Allende's Govt.' Designers, Scientists and Technologists could see how industrial design can play a meaningful role in a socialistic Country! 'Bonsiepe-Papanek' controversy in approaches was a non-issue in India! However, 'Design for Real World' written in English made a good reading material for youngsters in the later years!

4.2 Taking a look after 40 years

Bonsiepe reflects in an interview in 2019, his 1973 report and asserts that many points brought out in the report are still valid for peripheral countries. However, he recommends new factors to be incorporated like

- priority to technologies concerning media
- focus on products and the processing industries
- design into the policies of scientific and technological innovation
- 'knowledge design'/ 'Information design'
- taking into consideration the environmental and social effects of industrialization
- Development for whom?
- public policies in the area of design
- services for the citizen as an undeniable need

5.0 Bonsiepe's new thinking on design and its implications

Bonsiepe entered into a new zone of thinking in later years. With new understanding of Heidigger and Maturana , and drawing from the work of Terry Winograd and Fernando Flores as seen in their book 'Understanding Computers and Cognition' he connects 'Design and Language'. This liberates 'design' from its conventional role limited to 'Form, function and aesthetics' giving it the status of 'human action', in a new ontological category, creating human behaviour and culture.

Significance of 'Interface' as seen in his famous papers 'From Material to Digital and Back' and 'Design as a tool for Cognitive Metabolism,' is well recognised by the Designers in the digital zone.

Interface is yet to be explored in the physical zone.

In the frame work of Bonsiepe's 'Interface theory' it will be possible to examine 'Act of design' as encoded in all 'creations' of human beings for living and survival. 'Acts of thinking design' by all professions may it be a genetic scientist, designing vaccine for a virus or a traditional craftsman making a basket to carry loads with good understanding and feel for bamboo as a material, can become an area of concern for design research.

Christopher Alexander in his later works, articulates this dimension of design as 'order'!

I have talked of the necessity of designers to reflect on 'self as an envelope' to go beyond their 'perceptual envelops' to exercise their creativity in global context, in a paper 'Language, Reality and Creativity' (2013) www.agrao.in The area needs much exploration and that is where Bonsiepe's Interface becomes important.

Bonsiepe offers us a *tangible frame work, when he says, in 'Disobedience of Design',*

"To borrow from the idea of the "system of attention" from neuroscience, it could be said that a designer pays attention to the use of materials and semiotic artefacts in order to structure the user's everyday scope of action, as it is determined by those artefacts." (page311)

But he clarifies later when he says

'This does not mean, under any circumstances, fixing oneself on the object in the design process and taking it as the starting point and end point of the design process, but rather looking beyond it to address a further area of concern: a chair as an answer to the problem of sitting, a lamp to the problem of lighting, a car to the problem of mobility.' (page 312)

Bonsiepe also quoting French philosopher Balibar 'to concentrate on use instead of consumption as a 'civilization of use' instead of 'a civilization of credit', points out

'This is precisely where design that aims to change society would have a starting point'.

Implications can be seen in many areas of design like
Sustainability of the Planet,
Identity, brand and national identity,
Culture, Handicrafts,
Information(knowledge) design- education at all levels,
Public Policy – Governance, Institutions,
Innovations – Science and Technology,
Human relations',
……
The book offers clarity, starting points and guidance with examples for action and further research on these topics!

6.0 Interface at Strategic and Operational levels

Some designers in India, with experience and maturity have been engaged in design of 'Interface' in areas like crafts, education, Identity, etc., intuitively with their social and cultural commitments. Their work has materialised in forming new Institutes, departments, programmes of education. It is time to reflect and examine them in the 'frame work' of 'Interface' to create a 'design discourse' for design education and general benefit.

I will draw a quick inference with my experience in 'bamboo craft' and engagement with children in "Doors of Learning Project' to give an indicative potential.

6.1 Directions for appropriate adoption of technologies at Policy levels.

Under UNDP grant of 2million dollars, two policy approaches for Bamboo were taken in 1999.

6.1.1 *Adopting industrial high-tech mode based on Chinese model to make modern, well designed products for export with high returns to 'Benefit local economy and craft'.*

Big investments in private sector and Common facility centres were made with the above objective. New 'furniture designs' were developed at NID with container load of processed bamboo brought from China. But, Industrial units are still limping. Only stick making and curtain weaving could reach some level. But products neither got exported nor created wide spread craft employment using sticks. Bamboo ply boards made using woven mats pressed with machines did not take off! Even the binder used had a problem. PF resin was not health friendly.

Overall the policy did not succeed due to incapability to adopt technology suitable to Indian bamboo varieties and inevitable corruption when huge amounts are spent by Govt. Insufficient understanding of 'Interface'- objectives/goals and means/tools to reach the goals was the main reason.

6.1.2 *Develop tools and Technologies to benefit 1.35million bamboo craft workers in villages. Create sustainable employment in bamboo craft*.

Even before UNDP intervention

- NID under leadership of M.P.Ranjan made a significant contribution in 70s by documenting Bamboo craft in NE India assigned by handicraft Board headed by Pupul Jayakar and bringing into a book form. The book made a difference to educated middle class in India and abroad.
- It made little connection with practicing craft-persons at ground level. Design Intervention made through a small project given by Tripura Govt. proved ineffective.
- In 1993, IDC organised 1st national seminar cum workshop after a year-long project, 'Design Inputs into craft areas' financed by MHRD (Ministry of Human Resources and Development). A unique, weeklong workshop cum seminar called 'Jagruti'(Awakening) in Bamboo Craft, with participation of 15

designers,15 craft persons and 30 students was organised. It was a 'Talk and Do' 'design discourse'. With lead speakers like Prof.M.P.Ranjan and an architect turned into social activist Mr.Vinoo Kale and experienced designers participating it became major national event in bamboo craft and the proceedings were brought out as a book, 'Bamboo Craft Design' uploaded on my website.

- As my interest grew in 'bamboo craft as Interface', I took sabbatical leave in 1997 and spent initial 4 months in North East, working with NGOs, gaining more experience in issues connected with bamboo craft.
- My trip indirectly brought a UNDP project to IDC on 'Tools, Small Technologies and Finishes'. A tool kit was designed, developed and produced in numbers (500) using high tech facility like laser cutting. Later a private limit company 'AG Bambu Style' was formed by me to make mini-tool kits under SINE-IITB, when the tool kit manufacturer abandoned the manufacture of original kit.
- My engagement with UNDP project did not end with design of 'tool kit' as a successful product. It continued as 'Interface', leading to training craft persons and organising 'information design'. DC (H) dealing with bamboo craft who assigned the UNDP project had no policy structure how to reach the intended user. Our deeper motivation brought in training modules, MCFCs (Micro Common Facility centres), link with KVIC, entrepreneurship to manufacture tool kits, etc., into picture.

  It had many upheavals to encounter. A layer of Policy required could have come into picture right from the beginning as an understanding of 'Interface' by the policy makers and consultants writing reports for UNDP!

  To anticipate possible failures and offer alternative solutions which Bonsiepe mentions as a design requirement can be an 'eye opener' if it gets incorporated in the initial report. Even feasible Policies like linking bamboo craft to MGNRGA, a socio economic support policy of Govt. could have made significant difference for bamboo craft becoming economically viable to practice!

6.2 Looking at semiotic structure of products which shape the social standing of the user

- India has deep divisions in its social structure. Designers trained in institutes like IITs or NID do not subscribe to these 'distortions' in its tradition. IDC team had to assert 'a modern brief case like look for bamboo tool kit' when challenged by entrepreneurs who employ craft persons. In the feedback workshop with DC(H) officer and INBAR secretary, called 'Get Up", a craftsman

said, he liked the new tool kit because it gives him 'social prestige' when he goes to conduct demos in Delhi! Articulating 'Toolkit as Work station' akin to a 'lap top', by the designers paid off!

- An offshoot of 'Design Link', a project funded by INBAR in 1998, IDC got another small project supported by YUVA an NGO in 2001, to assist a small production group of 10 girls from traditional craft community in Mumbai. Called 'Chaitanya' the unit provided employment for school dropout girls with regular salary. Girls were trained in making new products with coil technique (tea coasters), weaving (dinner Mats), etc. A significant social change was observed. Fathers of these girls, often drunk, would bring lunch for the girls as they had a job in a work unit(factory). At home Girls always were ordered to serve their often drunk fathers.

  Such insights can very well be part of 'systematic Interface approach'.

6.3 Looking at semiotic structure which reveal cultural encoded in product to understand and inherited cultures.

- Bamboo craft in India with its long tradition has many cultural connotations and encodings which need to be deciphered. Bamboo stretcher is used to carry dead bodies which are taken for cremation. A client came to AGBS for designing a foldable device which goes into a kit, for the purpose. My colleague and his assistants who took up the project got confined to the brief given by client and did not look at the interface how the bodies are burnt. They worked on well-designed wooden joints like in a modern furniture, which were easy to use with possibility of reuse! It was only discovered by the design group later that 'stretchers are also burnt and the joints became quite expensive considering one-time use'. The client abandoned the solution offered and found his own 'make shift design with pegs to assemble the stretcher' which has to be done by the user'.
- I came across in Majuli, largest sweet water island in Brahmaputra river, a 'hand-fan' woven in Rattan(cane) with a special local process, for the temple for a particular festival. It was of high quality with fine weaving but takes a month to make. An expensive purse, mobile pouch or a shoe to wear can be designed using the same material. But the makers were reluctant to consider any such option because the product was made as an 'offering to gods'!
- Jhapi is a hat, made in bamboo in Assam with special skills, still used as prestigious collection to decorate a drawing room by rich people.
- In Nagaland each tribe has a specific weave with unique motif and pattern for their shawls and 'special baskets' which are given as marriage gifts.

In all these cases design as language creates a culture and the study of 'interface' which reveals encoded messages needs research and documentation as design discourse!

6.4 Use of product interface in creating a paradigm shift in 'information design'.

- An IDC graduate with M Des (V C) was engaged to work on manual for bamboo tool kit. Lot of effort was needed to convince the designer not only to 'derive pictures showing exact positions from a video' but also to make illustrations in ink drawings. Designers with low skills in line sketching tend to stick to photographs which they claim as 'modern'. Considerations like 'these illustrations once made will be also used in brochures printed locally where the quality of printing is poor and photographs do not give right information' need to go into design education as interface study.
- An NGO organiser was not ready to give the brochure to a craftsman because he was illiterate. The person had to be educated to understand that 'visual communication' in the brochure does not need language literacy. A brochure given to illiterate craft person adds to the 'social standing of craft person' whose son or grandson is studying in school.
- Even a request from an IAS officer came to us for making use of our manuals in adult education programme, as the content will become meaningful. Yet another level of interface to address!
- In Jarkhand, a sceptic official was adamant to believe the ability of 'illiterate tribal woman' to put back the tools in to the bamboo toolkit. When the crafts-women put each tool by matching its figure 'screen printed' on the tool pouch, he grumblingly acknowledged the fact!

Information design an off shoot of 'Interface' has the power to change social perceptions.

6.5 Bamboo Craft as a Postmodern Venture

It is crucial to adopt possible theoretical frame works for areas like bamboo craft for practice as well as its presence in Institutes of higher Learning.

- I have argued a case for 'Craft as a Post Modern Venture: Experience in Bamboo Craft' in a paper presented in Brazil in 2008.

This approach helped AGBS to run as a small entrepreneurship in Bamboo Craft. The proposition also lead to a course 'Craft, Creativity and Postmodern design' for M.Des and Phd students at IDC,IITB. As a result, Bambu studio and skilled craftsman as instructor, became legitimate part of IDC. The platform led to many experiments and a 'design discourse' across the disciplines. It was an open elective for all disciplines including PG students of Computer science, Engineering,

Management and Rural studies, etc. Craft Development Institute (CDI), Craft Institute at Jaipur, BCDI, STRC in Gondwana University, offering programmes at vocational level have links with Bambu studio at IDC. Design students from other institutes come as interns as well.

The concept of 'Interface' offers a suitable framework to consolidate the 'design discourse' and facilitates IDC to become a thought leader in 'craft design'.

6.6 Sustainability, 'global and local' issues:

Global agencies were interested in bamboo as it is one of the fastest growing bio-masses.

- Our concern at IDC was sustainability of bamboo craft persons numbering 1.35 million. A potential was there to create employment for all of them using eco-friendly bamboo with existing production quantity.
- 50 plus workshops done at ground level in villages brought many insights like knowing the aspiration of a traditional craft person: a secure job and change in social positioning.

This led to 1-year Bamboo craft entrepreneurship course at Gondwana University which was conceived at IDC. Efforts are on to shape it in a designerly framework!

6.7 Information Design for School Education: Emphasis on Visual communication and study *audiovisualistics* at strategic level.

Bonsiepe says in a paper, 'Design, The Blind Spot of Theory; Theory, The Blind Spot of Design', written for an event in Jan van Eyck Academy (1997):

These new learning environments will have to be invented and designed. Here the designer could come to terms with his mission: to be a provider of tools. But in order to cope with this issue, he needs to offer more than visual expertise if he does not want to run the risk to be pushed into an ancillary role of visualizing concepts provided by others. (page286)

The above statement rings bells as I was engaged with a small team in exploring this very mode! I got involved with teaching children 'Crafts and Maths' in workshop mode with alocal NGO called 'Pomagranate Workshop'. A Phd student was also working on the topic. We came up with a method called TLP-Teaching Learning Platform, as means for engaging children. Workshops like Bammetry combined bamboo craft and Math to learn Symmetry. Spatial (theatric experience), Visual tasks, mat- weaving in bamboo, games, videos etc., were used on the topic of Symmetry. Dozen workshops done on different occasions crystallised a tacit framework which became a base for a project 'Doors of Learning' which engaged children of 7th class every Saturday for a year to relearn 'class syllabus' in Maths. 3D products were also designed and used for learning. This got extended into a Math-Teachers' work

shop called ‘INNOMATH’ where teachers became co-designers for the content to teach! A team of students and research scholars, practicing designers supported all the events and efforts. Some of these are reported in my website www.agrao.in .

Specific theoretical frame work was not articulated beyond conceptualising ‘TLP’ for practice. Bonsiepe’s concepts of ‘Interface and Information design’ offer a frame-work for design discourse.

The power of audiovisualistics articulated by Bonsiepe in the book, is still at a distant land, and remains a Utopia, although IDC School of Design with faculty in all disciplines of design including ‘Film making’ is capable of exploring and executing such an ‘interface’ to create an ‘exemplar’ for future learning!

Note on abbreviations used

DC(H) – Development Commissioner (Handicrafts)
MCFC- Micro Common Facility Centre
KVIC- Khadi and Village Industries Commission
MGNGRA- Mahatma Gandhi National Rural Employment Guarantee Act
BCDI- Bamboo and Cane Development Institute
STRC- Science and Technology Resource Centre

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