Appendices
Appendix 1

A1 Glossary of terms:
The definitions in this glossary are a mixture of those I defined for the purposes of this study and those selected from other sources; this is often the case with terms from development theory. These are then referenced back to the original sources.

Appropriate technology
Technology which is appropriate to the local situation to which it is used, in terms of function, initial cost, the cost to maintain, and expertise to run and maintain it.

Artisans
Manual workers who manufacture on a small scale but are not involved in the crafts sector, e.g. metalworkers in Sri Lanka (3.4.2). This term is used in the development literature to describe all small-scale manufacturing workers, but in this study the term ‘crafts person’ was used as a more accurate descriptor of the manufacturing workers involved in the research.

Crafts enterprise
A small business which produces craft items, usually involving one or two craftspeople.

Crafts groups
In this study the term crafts groups refers to a small number of crafts people concentrating on a small range of products produced via one main craft production technique (e.g. terracotta pottery) and in general only using one material (clay).

Crafts person
A manual worker who produces craft items generally made by hand in a traditional manner, often using a single material such as terracotta. The term is used to describe a single crafts man or woman.

Crafts people
The term used to describe more than one crafts person.

Crafts sector
A collective term used to describe all crafts producers

Context
The situation, people and activity in which an intervention takes place

Concern for Working Children’ (CWC)
A charity based in Bangalore, South India with a residential school/village, ‘Namma Bhoomie’ in Coondapoor, Western Karnataka. The charity’s focus is to address child poverty and exploitation via training as well as research, activism and political interventions. For more information, see http://www.workingchild.org/.

Development Context
Any context, place, people and activity where a development opportunity has been identified.
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**DFID**
The United Kingdom government Department for International Development.

**EDS**
Existing Design Skills.

**ETK**
Existing Technical Knowledge.

**Existing Technical Knowledge**
Technical knowledge held by local people prior to an intervention (See 4.5.6 p275).

**Existing Design Skills**
Design skills held by local people prior to an intervention (See 4.4.5 p 242 and 4.5.6 p277).

**Field Experiment**
A design training intervention specifically focussed on testing aspects of learning drawn from this study, which took place in a selected development context with a small group of craftspeople.

**FRI**
The Forestry Research Institute (FRI) based in Dehradun Uttaranchal, Northern India, originally formed as the Imperial Forestry Research Institute under British colonial rule.

**Fun**
Elements incorporated into the training process that help to maintain energy levels and build relationships with other team members and facilitators. “The development vocabulary can no longer do without the word ‘fun’, a sense of creative energy, a spirit of play”(Chambers,1997 p207).

**Games**
Techniques to facilitate the introduction of ‘fun’ and/or competition into the training process, as means of emphasising a particular training pointing in order to provide relief or to maintain energy levels.

**Grass roots**
The theoretical description of a local situation, often referring to a movement or action happening at a local level; “the most basic level of an activity or organization”1.

**Globalisation**
“The growing interdependence and interconnectedness of the modern world through increased flows of goods, services, capital, people and information. The process is driven by technological advances and reductions in the costs of international transactions, which spread technology and ideas, raise the share of trade in world production and increase the mobility of capital” (DFID, 2000 p504).

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**Ground up**
The theoretical description of an activity or information which is derived and sustained by local people at a local level. This term is often defined in opposition to the term `Top Down`, which defines an intervention imposed from outside a situation often by bodies which are deemed superior, such as government.

**HFG, Ulm**
Hochschule für Gestaltung - a higher education institution established in Ulm, Germany in 1953².

**ICSID**
The International Council of Societies of Industrial Design

**IIT**
Indian Institute of Technology, these are seven government founded centres of excellence for higher training, research and development in science, engineering and technology in India based in Delhi, Kanpur, Kharagpur, Madras, Bombay, Guwahati and Roorkee. For more information see [http://www.iitd.ernet.in/about/](http://www.iitd.ernet.in/about/)

**IIITD**
Indian Institute of Technology, Delhi is one of the seven Indian Institutes of Technology(IIT), created as centres of excellence for higher training, research and development in science, engineering and technology in India. The others are located at Kanpur, Kharagpur, Madras, Bombay, Guwahati and Roorkee. For more information see [http://www.iitd.ernet.in/about/](http://www.iitd.ernet.in/about/)

**ILO**
The International Labour Organisation.

**Immersion**
A protracted period of time spent in a development context in order to understand the broader socio-political environment as well as the day-to-day realities of the local group you are working with.

**Indigenous Knowledge**
Accumulated local knowledge originating from a particular place, relating to history, culture, materials, technology, geography, botany, ecology, medicine, agronomy, linguistics and aesthetics. It is often described in the literature with the ‘ethno’ prefix as the basis for development initiatives (Chambers, 1983 p82).

**Indigenous Technical Knowledge**
Local knowledge of skills, technologies and materials used which can be used as the basis for sustainable development initiatives.

“Indigenous technical knowledge (ITK) is now respected more, and valued not only for its validity and usefulness, but because it is part of the power of the poor. ITK is strong on knowledge of local diversity and complexity, precisely where outsiders' knowledge is weak. In rapid change, its advantage over outsiders' knowledge are even greater”(Chambers, 1993 p11).

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² For more information see: [http://www.hfg-archiv.ulm.de/english/the_hfg_ulm/history_3.html](http://www.hfg-archiv.ulm.de/english/the_hfg_ulm/history_3.html)
**Industrial Design**

The area of expertise concerned with the conceptual, formal and material properties of three-dimensional products for consumption, to be produced by industrial production processes.

**The Informal Sector**

Taken from the DFID white paper 2000, “Also known colloquially as the “grey economy”, that part of an economy that escapes regulation by government authorities, particularly in the areas of contracts and company law, taxation, and labour law; hence the basic activities of enterprises are not, or not consistently, subject to formal regulation and oversight” (DFID, 2000).

King et al, suggested that a broad distinction can be drawn between two tiers of the informal sector: subsistence self-employment and entrepreneurship self-employment, “This division can be described as the difference between the upper echelons of the informal sector where the self-employed may be thought of as micro-entrepreneurs and much larger lower reaches ...of the self-employed where they may also be termed the casual poor ...that are in reality surviving rather than developing through self-employment” (King, 1995 p1).

**Intermediate Technology**

See Appropriate Technology.

For a detailed discussion of definitions of appropriate and intermediate technology, see `E F Schumacher Industrialisation through Intermediate Technology' (Schumacher, 1997 p130).

**Intervention**

An action, activity, workshop, etc. which is instigated by an outside party and takes place in a given development situation. The issues surrounding intervention are discussed in detail in 3.2.4 and 4.2.4.

**ITK**

Indigenous Technical Knowledge.

**KHDC**

The Karnataka Handloom Development Corporation. For more information see: [www.khdcl.com](http://www.khdcl.com)

**KVIC**

The Kadhi and Village Industries Commission is a statutory body created in 1956, under the Ministry of Small-scale Industries and Agro and Rural Industries of the Government of India. Its remit is to support and develop small-scale, predominantly crafts-based industries. ‘Khadhi’ is the Hindi word for ‘home spun cloth’ made famous by Gandhi and the Indian independence movement as a symbol of self sufficiency. For more information see [www.kvic.org.in](http://www.kvic.org.in).

**LD**

Professor Lalit K Das, member of design teaching staff at IITD and coordinator of the rural crafts and industrialisation initiative of MGIRI.
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**Levellers**
Strategies to build more ‘level’ relationships. The concept of ‘levelling’ relationships or ‘reversing’ expectations is a key aspect of participatory development practice (Chambers, 1997 p146).

**Local**
“Pertaining to a particular rural or urban place or area” (Chambers, 1997 pxv).

**Lowers**
“People who in a context are subordinate or inferior to uppers. A person can be a lower in one context and an upper in another”(Chambers, 1997 pxv).

**MGIRI**
The Mahatma Gandhi Institute for Rural Industrialisation (MGIRI) is an Indian government-funded initiative created in February 2002 as a development of the Wardha Institute, set up by Mahatma Gandhi in 1935.

**MIT**
The Massachusetts Institute of Technology. For more information see [http://web.mit.edu/](http://web.mit.edu/).

**NID**
The National Institute of Design. The main campus is based in Ahmedabad, Rajasthan, but there are a number of satellite campuses. For more information see [www.nid.edu/](http://www.nid.edu/).

**NIFT**
The National Institute of Fashion and Technology. The main campus is based in New Delhi, but there are a number of satellite campuses. For more information see [www.nift.ac.in/](http://www.nift.ac.in/).

**NISTADS**
The National Institute of Science Technology and Development Studies based in New Delhi. For more information see [www.nistads.res.in/](http://www.nistads.res.in/).

**North**
“The richer more industrialised countries mainly in the temperate northern hemisphere” (Chambers, 1994 pxvi).

**ODA**
The Overseas Development Administration was part of the UK government Foreign and Commonwealth Office and was the department which managed the international development programme. In 1997, DFID was set up and took over this activity. For more information see [http://www.dfid.gov.uk/About-DFID/History1/](http://www.dfid.gov.uk/About-DFID/History1/).

**Participant**
A person who takes part in a workshop/ activity/ project.

**Participatory Development Approaches**
A range of strategies and techniques which are used to help local populations to identify and analyse need and produce locally sustainable solutions.
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**Participatory Development Theory (PDT)**
A branch of development theory, which focuses on enabling local populations to identify and analyse need and produce locally sustainable solutions.

**Participatory/participative**
Interchangeable terms used to describe an approach based on PDT

**PBK**
Poonam Bir Kasturi, a crafts training facilitator and also a member of design staff at Srishti based in Bangalore, South India. She is also involved in the second field experiment (4.4) and the immersion period (4.5)

**PDT**
Participatory Development Theory.

**Poor**
“Has a common and wide meaning, which goes beyond its use as the adjective for poverty (see below) to include a broader sense of being deprived, in a bad condition and lacking basic needs” (Chambers, 1997 pxv).

**Poverty**
“A condition of lack or physical necessities assets and income. It includes but is more than income poverty” (Chambers, 1997 pxv).

**PRA**
Participatory Research and Analysis, a participatory approach to development.

**Product design**
The distinction drawn between industrial and product design in this thesis relates to the way products are made. Product design encompasses a broader spectrum of manufacturing processes from handmade through to and including industrial processes.

**Production group**
A small group of crafts people generally centred around one senior craftsperson, assisted by family members and/or an apprentice.

**RS**
Renulka Savasere, a crafts training facilitator based in Bangalore, South India and involved in the second field experiment (4.4).

**RSA**
The Royal Society of the Arts. For more information see: [www.thersa.org/](http://www.thersa.org/).

**SDC**
The Swiss Agency of Development and Cooperation. For more information see:[www.sdc.admin.ch/](http://www.sdc.admin.ch/)

**Stipend**
A payment to recompense a craftsperson for attend a training workshop. This term needs to be understood by its local meaning as opposed to that of a salary for an official, such as a magistrate or member of the clergy.
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**Sustainability**
A principle that governs whether an intervention or activity can be continued beyond its initiation with the available resources.

“Sustainability is not a 'thing' that can be found or held. It is a condition or a property of complicated systems linking human behaviour to the natural environment. The system can be very small, localised and simple, or very large and complex. But, 'local' or 'simple' appearances are usually deceptive, because in the real world boundaries between systems are seldom, if ever, completely closed. In one way or another, systems interact with each other horizontally and vertically. In other words, what is local is also global and vice versa”(Fowler, 2000 p8).

**Sustainable development**
Development activity which can be sustained by the people it is targeted at, using resources that are available and affordable to them; sustainable development is by definition context-dependant. The most widely accepted definition of sustainable development is that proposed by the Bruntland report (Our Common Future), “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987 p1).

**Sustainable livelihoods**
Enterprise activity which is sustainable in terms of the personal, the material, access to markets and financial resources available.

**Sustainable market**
A market for crafts products, which is readily accessible to the crafts group and is feasible to use as a long-term sales venue for their products. Examples of unsustainable markets might be one-off crafts fairs, which involve transport costs and/or fees; temporary street stalls; competitive tenders for large-scale orders without the guaranteed capacity to deliver.

**South**
The poorer more agricultural countries, mainly in the tropics (Chambers, 1983 pxvi).

**SU**
Swathi Unakar, a member of design staff at Srishti based in Bangalore, South India and involved in a crafts training workshop in Kinhal during the immersion period (4.5).

**Technician**
A skilled manual worker employed by an organisation in developing, manufacturing and maintaining a product range.

**Training framework**
The collection of training strategies and supporting materials designed and developed during this research project.

**Training trainers**
A development strategy whose aim is to ensure training interventions are more sustainable by training local people who can in turn train others. Similar terms are ‘peer to peer’ and ‘autonomous propagation’.

**UN**
The United Nations.
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**UNDP**
The United Nations Development Programme.

**UNESCO**
The United Nations Educational Scientific and Cultural Organisation.

**UNIDO**
The United Nations Industrial Development Organisation.

**Uppers**
“People who in a context are dominant or superior to lowers. A person can be an upper in one context and a lower in another” (Chambers, 1997 pxvi).

**The West**
A term analogous to ‘the North’ “The richer more industrialised countries mainly in the temperate northern hemisphere” (Chambers, 1994 pxvi).

**WHO**
The World Health Organisation. For more information see [www.who.int/](http://www.who.int/).
Appendix 2

A2 Discussion of Aims and Objectives

The original aim of the research set in November 2000, when the research was first registered, was:

**Original aim:** To investigate an appropriate model or strategy for the delivery of basic design training in a specific development situation.

This was revisited prior to the main field trials early in 2003. It was considered largely still appropriate, although it was been re-worded for clarity:

**Revised aim:** To investigate a strategy for basic design education which is appropriate to the needs of artisans in a specific development situation.

- **Objectives**

In reviewing the four original objectives, it was felt at this stage in the project (early 2003) that some of them may have already been achieved as they stood and others required some reframing.

Objectives 1 and 2 remained valid throughout the research and were achieved during the broad critical review activity, the bulk of which was undertaken between 2000 and 2002.

**Objective 1:** To investigate and evaluate the impact of design in development programmes.

**Objective 2:** To investigate and evaluate education and training programmes which relate to or inform the field of design in developing countries.

- **Revised objectives**

The remaining two objectives (3 and 4) remained valid in principle, but required some slight re-wording to reflect experience and conclusions drawn from the initial field experiment (4.3); that a less formal strategy was needed for the delivery of training, which reflected the needs of crafts people in developing new products.

**Original objective 3:** To propose and evaluate a framework of principles on which a programme in design education might be based.
This objective remained the same apart from the inclusion of the word ‘training’.

**Revised objective 3**: To propose and evaluate a framework of principles on which a programme in design training might be based.

However, objective 4 was re-worded to reflect the current focus of the project.

**Original objective 4**: To design, pilot and evaluate, through initial and main trials, a sample module or modules of an education or training programme, which would enable local people to identify, analyse and provide sustainable solutions to relevant design and production problems using appropriate technology.

**Revised objective 4**: To design, pilot and evaluate, via field experiments, a series of strategies and approaches for education or training. These would assist in enabling local people to identify, analyse and provide sustainable solutions to relevant design and production problems for products for everyday use for local markets.
Appendix 3

A3 Interview questions: Learning from practitioners (3.3)

A3.1 Initial interview questions
March 2001

With regard to specific project or programme:

Q1: What was the project?
Q2: What was the initial project aim?
Q3: What was the final outcome?
Q4: How did this differ from the initial project aim?
Q5: What measures of success were applied?
Q6: Was local involvement encouraged?
Q6a Was indigenous knowledge utilised? - If so how?
Q7: If so, what techniques were used?
Q8: What was the initial budget for the project?
Q9: How did this compare with the final project cost?
Q10: Were there any obvious reasons for any overrun /under-spend?

General background Questions

Q11: Are you aware of any case studies of the use of design in developing countries? Product case studies or education case studies?
Q12: Do you think that product design has a role in developing countries?
Q13: What place does indigenous knowledge have in product design in developing countries?
Q14: Do you think that design education has a role in developing countries?
Q15: What would be your view on best practice in intervention?
Q16: What would be your view on best practice in participation?
Q17: What would be your view on best practice in the propagation of projects?
A3.2 Revised Interview Questions
April 2001 draft 2a

Relating to PhD study – the appropriate use of design education in developing countries

1. General background Questions

Q1: Are you aware of any case studies of the use of design in developing countries? Product case studies or education case studies?

Q2: Do you think that product design has a role in developing countries?

Q3: What place does indigenous knowledge have in product design in developing countries?

Q4: Do you think that design education has a role in developing countries?

Q5: What would be your view on best practice in intervention?

Q6: What would be your view on best practice in the propagation of projects?

2. Product Design

Q1: If product design has a role to play in a development context, what would be the most useful areas of application?
   a. Aesthetics - Differentiation
      Cultural semantics
   b. User issues – Ergonomics
      Anthropometrics
   c. Training/ Education
   d. Participation and collaboration.
   e.
   Q2 Are you aware of any examples of indigenous design methods?

3. Sustainability

Q1: What factors make a difference in the sustainability of projects and products?
   a. Finance
   b. Marketing
   c. Production techniques
   d. Product quality
   e. Training
   f. Information sharing
   g. Collaboration between enterprises

4. Participation
Appendix 3

Q1 Can participation techniques be used to facilitate the implementation of design training and collaboration programmes in a development context? (This would seem to be supported by some recent literature).

Q2 Are you aware of any case studies which would support this position?

Q3 In your experience, how are needs currently identified and justified?

5. Innovation

Q1 What are the factors that limit innovation?
   a. Access to finance
   b. Lack of training
   c. Cultural resistance
   d. Other?

Q2 What factors would affect the risk inherent in innovation
   a. In a negative way?
   b. In a positive way?

5. With regard to specific project or programme that you have been involved with…

Q1: What was the project?
Q2: What was the initial project aim?
Q3: What was the final outcome?
Q4: How did this differ from the initial project aim?
Q5: What measures of success were applied?
Q6: Was local involvement encouraged?
Q6a Was indigenous knowledge utilised? - If so how?
Q7: If so, what techniques were used?
Q8: What was the initial budget for the project?
Q9: How did this compare with the final project cost?
Q10: Were there any obvious reasons for any overrun/under-spend?
Appendix 4

A4: Training interventions identified during observation and orientation (3.4)

A3.1 Analysis of different approaches to design interventions.
During the observation and orientation phase of the research, six different approaches by a range of organizations (Motivation, NID, IITD, VSO, CO HAND and NIFT), were identified and observed. The common factor with all of these organisations was that they all were engaged in crafts training. Each of the approaches are summarised below under common criteria.
### Comparison of different approaches to design training interventions in India and Sri Lanka identified during observation and orientation

<table>
<thead>
<tr>
<th></th>
<th>Motivation</th>
<th>NID</th>
<th>IITD</th>
<th>VSO</th>
<th>CO HAND</th>
<th>NIFT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus</strong></td>
<td>To train technicians in design principles, to enable them to develop new products.</td>
<td>Exposure to the potential of design as a value-adding and differentiating factor in the market.</td>
<td>Empower artisans to design new products and to create an atmosphere which encourages creative thought.</td>
<td>Importing of western design influences.</td>
<td>An emphasis on marketing alongside a programme of crafts fairs.</td>
<td>Design as value-adding factor ethos: Study; Identify; Intervene.</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td>Intensive classroom-based training with practical exercises.</td>
<td>Intuitive approach, based on western design pedagogy as taught in NID.</td>
<td>Project-based training model. Time given to orientation and skills identification.</td>
<td>The embedding of a foreign designer in a local enterprise or NGO.</td>
<td>Using locally trained designers as consultants to train crafts people.</td>
<td>Using imported (Indian) design students to work alongside crafts people.</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>6 days</td>
<td>Short term – 3-7 days.</td>
<td>Longer workshops - 15-20 days.</td>
<td>1-2 years.</td>
<td>5-7 days.</td>
<td>Total project 6 months – interaction time 2-3weeks.</td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
<td>The training was a pilot project with the aim of facilitating local development of products</td>
<td>Some aspects of impact considered, “We don’t want to upset his [the artisans] apple cart with a U turn”.</td>
<td>Aim to empower crafts people with skills to help develop their business enterprises.</td>
<td>Potential for sustainable enterprises to be established, but enterprises could become dependent on the design ‘mentors’.</td>
<td>One-off workshops; long-term empowerment not considered.</td>
<td>No evidence of second generation of products developed by the crafts people after the designers had left.</td>
</tr>
<tr>
<td><strong>Plus points</strong></td>
<td>Practical approach with a small group enabled the training to be tailored to the emerging needs of the trainees.</td>
<td>Attempts to identify and meet expressed product development issues. Some impact evaluation attempted.</td>
<td>More focus on the development of the artisan. End of workshop exhibition provides a good focus.</td>
<td>A longer term in which to establish good practise.</td>
<td>The focus on marketing and provision of crafts-fairs allows the artisans to sell independently, thus bypassing the middlemen.</td>
<td>Evidence of significant change in products produced.</td>
</tr>
<tr>
<td><strong>Limitations</strong></td>
<td>Training based on formal western pedagogic models.</td>
<td>One-off events - rare to return to the same group.</td>
<td>One-off events, informal approach, no evaluation of impact.</td>
<td>Adopted approach often one-one mentoring approach. Limiting on numbers.</td>
<td>Little consideration for long-term change.</td>
<td>The empowerment of the crafts people and the development of skills were secondary to the development of new products.</td>
</tr>
</tbody>
</table>

Table: 12 Comparison of different approaches to design training interventions in India identified during observation and orientation.
• **Reflections**

Of the six approaches described in the table above (12), three of them were identified as having elements of their training approach which merited further investigation. These were the approaches adopted by the three established design institutions; NID, NIFT and IITD.

The outreach arm of the NID took the approach of introducing crafts people to design principles over a short workshop. Some impact assessment was made, but it was unclear how this was achieved and what the criteria was for evaluation.

The approach adopted by NIFT could be characterised by the word ‘exposure’. The project placed young designers using western-type design and product development techniques alongside local artisans, with the aim of demonstrating the potential of design to improve existing markets for traditional crafts people. Bhat described it as a design Yantra (journey), where the crafts people and designer learn together. As an approach, this may lack elements of tangible outcomes for the crafts people beyond a new range of products, but in other senses it may point to the need for practical, visual and hands-on demonstration as an integral part of the design training process. NIFT took the approach of design collaborations between trained designers and crafts people. The results in the short term were very impressive, leaving behind a range of well-designed new products. Whether these could be replicated once the students had left was another larger question. Although the design students left after the intervention was over, there was an ongoing presence in the field in shape of a project field office, and evidence is not available to evaluate the long-term effects of the design intervention on the crafts people.

The approach adopted by IITD, however, was almost opposite to the NIFT approach and focused on the thinking process and trying to create an atmosphere that encouraged creativity building in the individual capacity of artisans; or, as Professor Das described it, “developing the person and not the product” (L.K.Das, personal communication 25th March 2002). This ethos of capacity building was, however, not strongly focussed or theorised and was based on existing models of design education. Their ultimate aim, which was unique out of the five approaches, was to train crafts people to become designers. In this case students were not involved and although the training was coordinated and run by a small number of IITD academic staff, this team was augmented by a range of practicing artists and designers. One question raised during discussion with the staff at IITD was the difference between the role of design in a small crafts enterprise and in a large company.
The conclusion we all came to was that the base reality was not very different. Both wanted to develop products that would appeal to a chosen market and could be produced economically to an acceptable level of quality; both needed to consider user issues and both could use design as a means of differentiating their products in the market.

Of the three models, the IITD approach offered more potential for sustainable empowerment of crafts people. Following this field visit, opportunities to collaborate with IITD on a training intervention were pursued which resulted in the first field experiment in Dehradun, North India.
Appendix 5

A5 Training workshop timetables (4.3,4.4 and 4.5)

A5.1

<table>
<thead>
<tr>
<th>Day 1</th>
<th>12 - 23 December 2002 [full day sessions 9am-5:30pm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Tues)</td>
<td></td>
</tr>
<tr>
<td>Day 1</td>
<td>Settling into accommodation</td>
</tr>
<tr>
<td></td>
<td>Familiarising team with FRI facilities</td>
</tr>
<tr>
<td></td>
<td>Finalising workshop accommodation</td>
</tr>
<tr>
<td></td>
<td>Initial drawing exercises with a small number of participants</td>
</tr>
<tr>
<td></td>
<td>Welcome dinner for the resource team</td>
</tr>
<tr>
<td>Day 2</td>
<td>AM Most of the participants arrive</td>
</tr>
<tr>
<td>(Wed)</td>
<td></td>
</tr>
<tr>
<td>Day 2</td>
<td>9-11am A helpful tour of the FRO museums and exhibitions</td>
</tr>
<tr>
<td></td>
<td>11am-1pm Inauguration event.</td>
</tr>
<tr>
<td></td>
<td>2-4pm Tour of site with participants</td>
</tr>
<tr>
<td></td>
<td>4-6pm Presentation on natural furniture and informal introduction of the resource team.</td>
</tr>
<tr>
<td>Day 3</td>
<td>9-10:30am Observational drawing</td>
</tr>
<tr>
<td>(Thurs)</td>
<td></td>
</tr>
<tr>
<td>Day 3</td>
<td>10:30-1pm Lecture on wood seasoning</td>
</tr>
<tr>
<td></td>
<td>2-4pm Lab demonstrations on wood seasoning</td>
</tr>
<tr>
<td></td>
<td>4pm Participants arrive at the workshop</td>
</tr>
<tr>
<td></td>
<td>4-5pm Team selection &amp; briefing</td>
</tr>
<tr>
<td></td>
<td>5-6:30pm Initial exercise</td>
</tr>
<tr>
<td>Day 4</td>
<td>9:30-1pm Continue initial exercise</td>
</tr>
<tr>
<td>(Fri)</td>
<td></td>
</tr>
<tr>
<td>Day 4</td>
<td>2-4pm Talk JF: The furniture market in the UK (with translation)</td>
</tr>
<tr>
<td></td>
<td>4-6pm Exercise 2: Building on the results of the initial exercise</td>
</tr>
<tr>
<td>Day 5</td>
<td>9:30-10:30am Presentation on observation &amp; aesthetics by NS</td>
</tr>
<tr>
<td>(Sat)</td>
<td></td>
</tr>
<tr>
<td>Day 5</td>
<td>10:30-11am Visit to FRI etymology museum</td>
</tr>
<tr>
<td></td>
<td>11-12pm Complete exercise 2</td>
</tr>
<tr>
<td></td>
<td>12-12:30pm Critique session on exercises 1&amp;2</td>
</tr>
<tr>
<td></td>
<td>12:30-1pm Briefing for exercise 3</td>
</tr>
<tr>
<td></td>
<td>2- 5:30pm Start exercise 3</td>
</tr>
<tr>
<td>Day</td>
<td>Time</td>
</tr>
<tr>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>Day 6</td>
<td>9:30-1pm</td>
</tr>
<tr>
<td>(Sun)</td>
<td>2-5:30pm</td>
</tr>
<tr>
<td>Day 7</td>
<td>9:30-10:30am</td>
</tr>
<tr>
<td>(Mon)</td>
<td>10:30-1pm</td>
</tr>
<tr>
<td></td>
<td>2-3:30pm</td>
</tr>
<tr>
<td></td>
<td>3:30 –5pm</td>
</tr>
<tr>
<td></td>
<td>4pm</td>
</tr>
<tr>
<td>Day 8</td>
<td>9:15-10:30am</td>
</tr>
<tr>
<td>(Tues)</td>
<td>12-1pm</td>
</tr>
<tr>
<td></td>
<td>2-4pm</td>
</tr>
<tr>
<td></td>
<td>4-5pm</td>
</tr>
<tr>
<td>Day 9</td>
<td>9-10:30</td>
</tr>
<tr>
<td>(Wed)</td>
<td>10:30 –1pm</td>
</tr>
<tr>
<td></td>
<td>1pm</td>
</tr>
<tr>
<td></td>
<td>2-5:30pm</td>
</tr>
<tr>
<td>Day 10</td>
<td>9:30-12</td>
</tr>
<tr>
<td>(Thurs)</td>
<td>12-12:30am</td>
</tr>
<tr>
<td></td>
<td>11:30-1pm</td>
</tr>
<tr>
<td></td>
<td>2-6:30pm</td>
</tr>
<tr>
<td></td>
<td>4pm</td>
</tr>
<tr>
<td>Day 11</td>
<td>9:30 –1pm</td>
</tr>
<tr>
<td>(Fri)</td>
<td>2-5:30pm</td>
</tr>
<tr>
<td>Day 11</td>
<td>Am</td>
</tr>
<tr>
<td>(Sat)</td>
<td>Pm</td>
</tr>
</tbody>
</table>
### Yellahanka: Second field experiment

#### Workshop Programme:

**20th – 24th Jan 2004** [full day sessions 9:30-5pm]

<table>
<thead>
<tr>
<th>Day 1: Tuesday</th>
<th>Registration &amp; introduction to the workshop Exercises:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>River exercise (30mins)</td>
</tr>
<tr>
<td></td>
<td>Discussion (30mins)</td>
</tr>
<tr>
<td></td>
<td>Lunch</td>
</tr>
<tr>
<td></td>
<td>User awareness</td>
</tr>
<tr>
<td></td>
<td>Whose bag is this? (20mins)</td>
</tr>
<tr>
<td></td>
<td>Make an oil lamp for: James and Renuka (30mins)</td>
</tr>
<tr>
<td></td>
<td>Homework</td>
</tr>
<tr>
<td></td>
<td>Identify the need and user of the products in the picture</td>
</tr>
<tr>
<td></td>
<td>Identify the elements of the product:</td>
</tr>
<tr>
<td></td>
<td>• Form/ Colour/Motif/ Pattern/ Design / Size/ Shape</td>
</tr>
<tr>
<td></td>
<td>• Use/ Function</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 2: Wednesday</th>
<th>Review of homework</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discussion re. design words</td>
</tr>
<tr>
<td></td>
<td>Exercises:</td>
</tr>
<tr>
<td></td>
<td>Questioning the customer /user</td>
</tr>
<tr>
<td></td>
<td>• Formulate questions</td>
</tr>
<tr>
<td></td>
<td>• Session with yr 2 design students: Questions about a product</td>
</tr>
<tr>
<td></td>
<td>• (preferably one of their own)</td>
</tr>
<tr>
<td></td>
<td>• Feedback – better questions?</td>
</tr>
<tr>
<td></td>
<td>Draw a product &amp; describe 5W’s &amp; H</td>
</tr>
<tr>
<td></td>
<td>• Initially for 1 chosen user than for 3 other potential users.</td>
</tr>
<tr>
<td></td>
<td>• Mixture of individual and group work</td>
</tr>
<tr>
<td></td>
<td>• How can you modify your product given the information you have gathered?</td>
</tr>
<tr>
<td></td>
<td>• Make the ‘new’ product</td>
</tr>
<tr>
<td></td>
<td>Homework: bring a selection of your products in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 3 Thursday</th>
<th>Spontaneous discussion on users and their needs, referring back to the river</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feedback from yesterdays exercise: group reaction</td>
</tr>
<tr>
<td></td>
<td>• Use of drama to communicate and explore task analysis</td>
</tr>
<tr>
<td></td>
<td>Exercises:</td>
</tr>
<tr>
<td>Appendix 5</td>
<td></td>
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<tr>
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</tr>
<tr>
<td> Make a duplicate of one of your existing products</td>
<td></td>
</tr>
<tr>
<td>➢ An exercise in developing 3D sketching using transformation cues: cut/merge/fragment/add/subtract (R had a list of 28)</td>
<td></td>
</tr>
<tr>
<td> Home visits: PBK &amp; RS</td>
<td></td>
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<tr>
<td>➢ Bathroom - Kitchen - Dining room – Garden</td>
<td></td>
</tr>
<tr>
<td>➢ An opportunity to experience, observe and analyse another domestic environment; an experience of other lifestyles and to use as stimulus to identify new product ideas.</td>
<td></td>
</tr>
<tr>
<td>Day 4 Friday</td>
<td></td>
</tr>
<tr>
<td>Review of products that some of the participants have made overnight following the home visit. Discussion: Perceptions of materials and their function:</td>
<td></td>
</tr>
<tr>
<td>• Plastic vs. Terracotta – Function vs. Perception.</td>
<td></td>
</tr>
<tr>
<td>Exercise:</td>
<td></td>
</tr>
<tr>
<td> Prompted by the initiative of one or two craftsmen</td>
<td></td>
</tr>
<tr>
<td> A selection of briefs were allocated to the participants: either for PBK or RS’s Houses</td>
<td></td>
</tr>
<tr>
<td>➢ Serving container for crisps and relish/sauce</td>
<td></td>
</tr>
<tr>
<td>➢ A set of containers for serving three different food dishes (oily, wet, dry)</td>
<td></td>
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<tr>
<td>➢ A pickle jar and serving receptacle</td>
<td></td>
</tr>
<tr>
<td>➢ A screen for dividing rooms or obscuring windows</td>
<td></td>
</tr>
<tr>
<td>➢ A curd maker/ holder</td>
<td></td>
</tr>
<tr>
<td>➢ Jar for storage of dry stuff: rice, channa, etc.</td>
<td></td>
</tr>
<tr>
<td>➢ Flower display containers</td>
<td></td>
</tr>
<tr>
<td> Critique</td>
<td></td>
</tr>
<tr>
<td> Challenge: make a tall vase (12” x 3.5”) by the morning.</td>
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</tr>
<tr>
<td>Day 5 Saturday</td>
<td></td>
</tr>
<tr>
<td>The majority made some attempt at the tall vase challenge Discussion &amp; group feedback.</td>
<td></td>
</tr>
<tr>
<td>Revision of design vocabulary</td>
<td></td>
</tr>
<tr>
<td> Continuation of critique</td>
<td></td>
</tr>
<tr>
<td>Exercise:</td>
<td></td>
</tr>
<tr>
<td> Develop the product or set further</td>
<td></td>
</tr>
<tr>
<td>➢ Group feedback</td>
<td></td>
</tr>
<tr>
<td>Short exercises:</td>
<td></td>
</tr>
<tr>
<td>➢ A candle stand (std 9”x ¾”candle)</td>
<td></td>
</tr>
<tr>
<td>➢ Another candle stand (small spherical candle)</td>
<td></td>
</tr>
<tr>
<td>➢ Which was the best one?</td>
<td></td>
</tr>
<tr>
<td>➢</td>
<td></td>
</tr>
<tr>
<td>Group feedback</td>
<td></td>
</tr>
<tr>
<td>➢ What was the worst bit of the workshop?</td>
<td></td>
</tr>
<tr>
<td>(PBK felt this was an easier question to ask?)</td>
<td></td>
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</tbody>
</table>
## A.5.3

### Narayanpura: First main field experiment

**28th March 2005** [half day sessions 1pm -5pm]

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Monday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Introductions</strong></td>
</tr>
<tr>
<td></td>
<td>Handing out of sketchbooks, pens and pencils etc.</td>
</tr>
<tr>
<td></td>
<td>Icebreaker of personal rivers was started at 2.15pm</td>
</tr>
<tr>
<td></td>
<td>After an initial demonstration and translated explanation; the exercise prompted much discussion along with great enthusiasm, including (somewhat unhelpfully!) contributions from some of the casual observers from the village</td>
</tr>
</tbody>
</table>

**What is design?:** led translated discussion

An exercise based on 8 words or phrases each describing an element of design:

1. Form or Shape
2. ’How it looks’ or aesthetics
3. Colour
4. Pattern
5. Motif
6. Materials
7. ’How it works’ or function
8. Use

A grid was drawn on a large piece of paper with these terms down the ‘x’ axis and the participants’ names along the ‘y’ axis. Each person was then given 10 beans to use as voting counters and invited to cast their votes on what they felt were the most important elements of design process.

**Designing a chair: a sketch-led discussion on design**

This exercise then led on to a very helpful, impromptu discussion, communicated via large drawings of various everyday products. Each required careful consideration of the elements, which came into contact with the user, e.g. the handle of a teacup as opposed to a tea mug, or the information required to correctly design the knob of the lid of a storage container.

Likewise, who is the correct person to ask for information on the capacity of a storage container in a given market? These principles of basic ergonomics and function were communicated and discussed via role-play, humour and full-size sketching, which will be key theme of the workshop as it progresses.

The introduction of the idea of a design process via a river metaphor has been tested in a number of different forums and has worked differently in each case. In this case, the importance of making and testing new ideas in both a 2D and 3D manner emerged as a key theme, with a strong emphasis...
on the cyclical nature of product development. This large illustration will be displayed throughout the workshop and referred back to in order to emphasize the importance of process and testing.

**Homework:**
Sketch one of your own products in enough detail that someone else could make it

<table>
<thead>
<tr>
<th>Day 2</th>
<th>Analysis of existing designs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>As soon as the formal part of the workshop began, PBK took the initiative and initiated a task analysis exercise. Centred on the analysis of an existing product, the ‘pretty pot’ home composting unit. The exercise initially took the form of role-play analysis of the product and its function. Asking different members of the group including their observing children to interact with the product to determine correct heights etc.</td>
</tr>
</tbody>
</table>

**Group drawing**
This lead to a full size interactive drawing of the proposed new composting unit, which highlighted the basic functional features of the product. Following on from this the participants were invited to draw a number of different design alternatives for the product. Although a good attempt was made many of the alternatives looked very similar with different patterns or textures. In order to further facilitate this process the researcher demonstrated on a large scale a number of different design alternatives and prompted a translated discussion on the thinking process behind them. This served to provide a number of different possibilities however, it may have also overawed the participants and made them self-conscious of their own drawing abilities.

Note: PBK as a co facilitator chose to use elements of the card system out of order, responding to the group and how the session seemed to be flowing.

<table>
<thead>
<tr>
<th>Day 3</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>It was decided to bring the group to the college to enable them to use the library and computers. This could easily be facilitated by using public access net café’s and libraries but the college set up was more convenient and free to use. The day began with an overview of the ‘Finding out about the market’ cards This initiated a discussion on getting ideas for other sources – from the market, from books, magazines and the Internet. Also, the idea of looking for new markets was introduced with the market product grid, which in turn initiated the use of books and magazines, as well as discussions on existing products. The participants seemed to really enjoy the opportunity to look at a large range of books, both specifically to do with crafts as well as general art &amp; design, nature, architecture, etc.</td>
</tr>
</tbody>
</table>

Following this the participants were introduced to the Internet as a research tool. 3-4 of the group were able to
write in English and had used computers to a small extent; the rest were helped by students. A number of interesting product ideas were identified, such as images of ancient oil lamps and also modern simple forms which might influence the design of Deepa for a new market.

<table>
<thead>
<tr>
<th>Day 4</th>
<th>Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday</td>
<td>The main activity of the day was ideas generation based on sketches and ideas taken from the previous day’s research activity. The day began with a review of information gathered the previous day. The participants were encouraged to select interesting sketches and develop them further into possible products. As with previous workshop, the development of ideas in a two-dimensional manner was limited and energy was injected by asking them to make sketch models of their favourite ideas. The rest of the afternoon was taken up with developing new ideas both by hand and on the wheel, with some of the females instructing their male colleagues what to make on the wheel. The afternoon concluded with a review session and a request that the designs be developed over the coming evening. MRK volunteered that the group would use the nest morning to develop the ideas. Some of the most interesting group of ideas developed were those taken from web sites on ancient oil lamps e.g. <a href="http://www.ancientlamps.com">www.ancientlamps.com</a> <a href="http://www.ancientlamp.com">www.ancientlamp.com</a>. They featured lamps from Ancient Greece, the Roman periods, Egypt and Judea, among others. The simplicity of these lamps some of them from the iron age was in many cases is very similar to the Deepa (oil lamps) made by this group of craftsmen throughout the year but especially at Diwali. This simplicity of form and production was particularly interesting as by far the largest volume of sales of this wider product group came from the small simple products used as a day-to-day utility product. A number of the ancient oil lamps seen were either developed or planned to be developed due to the need for more complex production preparation, i.e. the need to make moulds. This in turn would reduce the manufacturing skills required and increase the potential production volume.</td>
</tr>
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<table>
<thead>
<tr>
<th>Day 5</th>
<th>Ideas selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday</td>
<td>The plan for the day was to begin with a review of the designs created on day 4 (28 in total) We started the day with a bean-voting exercise to select the best products from the previous day. The idea of how to</td>
</tr>
</tbody>
</table>
select ideas for further development was discussed and a voting exercise was run to facilitate this process. The criteria for the exercise were set with a short discussion on the novelty of the ideas produced as well as market potential. The participants were given 10 beans each and asked to put them in the products they liked best. This resulted in the removal of 10 products from the group as they weren’t voted for.

The merits of the products were then discussed and another exercise was introduced to facilitate discussion and selecting those products most suitable for development and testing in the market. Of the 20 or so products left we reduced this number further by cutting out those products which had attracted only one or two bean votes. This left 15 products. A large grid was drawn on the ground with 15 columns and 5 rows each product was placed along the top of the matrix and selection criteria were written along the vertical axis. The criteria used was discussed at length and eventually decided upon.

- Cost to make
- How many it will sell
- How much it will sell for
- Transport & packing issues
- Whether they as customers liked the product.

Each of the participants were given 40 beans to vote with and asked to vote for the products accordingly. They were told that they could put as many beans as they liked on any cell according to the importance they attached to the criteria for that given product.

3 products were chosen which the craftsmen felt were good enough to develop further and test market on their stall in the city.

This exercise prompted a discussion about the selection of designs for development and marketing. The participatory format underlines the value of everyone’s contribution and facilitates a peer-learning scenario.

To conclude the workshop, the participants were all given a tape measure as a gift and to emphasis the importance of measured drawings and paid the agreed stipend.
<table>
<thead>
<tr>
<th><strong>Coondapoor: Second Main field experiment</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday30th May – Friday10th June</td>
<td>[Mornings 9-1pm]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Day 1 Monday</strong></th>
<th><strong>Activities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intro: <strong>ball throw</strong> [names] 2 rounds –</td>
<td></td>
</tr>
<tr>
<td>2. Files give out sketching etc</td>
<td></td>
</tr>
<tr>
<td>3. <strong>Story…tiger</strong></td>
<td></td>
</tr>
<tr>
<td>4. <strong>Personal river</strong> ice breaker</td>
<td></td>
</tr>
<tr>
<td>5. Display “rivers” and discuss</td>
<td></td>
</tr>
<tr>
<td>Everyday task list introduce mind maps…</td>
<td></td>
</tr>
<tr>
<td>6. <strong>What is design?</strong></td>
<td></td>
</tr>
<tr>
<td>7. Design is … discussion &amp; voting</td>
<td></td>
</tr>
<tr>
<td>8. Design words intro</td>
<td></td>
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<tr>
<td>9. Voting game - discuss choices</td>
<td></td>
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<tr>
<td>10. Fun exercise ‘You can design’ - function &amp; then aesthetics.</td>
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<tr>
<td>[Design and make a hat - catwalk…]</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Day2 Tuesday</strong></th>
<th><strong>Activities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Energiser…</strong> Introduce your self as an animal?</td>
<td></td>
</tr>
<tr>
<td>2. Discuss process: review day one revisit everyday task. (m-map)</td>
<td></td>
</tr>
<tr>
<td>3. <strong>Design process</strong></td>
<td></td>
</tr>
<tr>
<td>4. River exercise</td>
<td></td>
</tr>
<tr>
<td>5. Display on wall</td>
<td></td>
</tr>
<tr>
<td>6. Emphasize cyclic nature</td>
<td></td>
</tr>
<tr>
<td>[Need big paper, pens tape]</td>
<td></td>
</tr>
<tr>
<td>7. Weaknesses and strengths? <strong>What do you want to learn?</strong> Discussion - Put up results?</td>
<td></td>
</tr>
<tr>
<td>8. Mind map the design elements of a chosen product. Put up</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Day3 Wednesday</strong></th>
<th><strong>Activities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>What is the problem?</strong></td>
<td></td>
</tr>
<tr>
<td>[Use a problem/dream from the personal rivers]</td>
<td></td>
</tr>
<tr>
<td>2. Who what Why Where stories</td>
<td></td>
</tr>
<tr>
<td>3. Mandala [pick a prob]</td>
<td></td>
</tr>
<tr>
<td>Problem statements</td>
<td></td>
</tr>
<tr>
<td>Poss. two runs through</td>
<td></td>
</tr>
<tr>
<td>Poss. <strong>Users</strong> intro if time</td>
<td></td>
</tr>
<tr>
<td>[Remind them to bring in one of own products]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Day4 Thursday</strong></th>
<th><strong>Activities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Users</strong> intro</td>
<td></td>
</tr>
<tr>
<td>[Need a small range of prods]</td>
<td></td>
</tr>
<tr>
<td>2. Bags exercise [new card]</td>
<td></td>
</tr>
<tr>
<td>3. Role plays:</td>
<td></td>
</tr>
<tr>
<td>Task &amp; Function analysis</td>
<td></td>
</tr>
<tr>
<td>4. Small group analysis of own products in terms of customers and users: <strong>Live customers if possible</strong></td>
<td></td>
</tr>
<tr>
<td>Working in pairs suggest changes based on usability</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th><strong>Day5 Friday</strong></th>
<th><strong>Activities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Market exposure</strong></td>
<td></td>
</tr>
<tr>
<td>2. Internet &amp; library searching and ideas collecting</td>
<td></td>
</tr>
<tr>
<td>3. Record on sketch sheets</td>
<td></td>
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<tr>
<td>Appendix 5</td>
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<td>----------------</td>
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<tr>
<td><strong>Appendix 5</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Start to think of new ideas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>4. Drawing intro</strong></td>
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</tr>
<tr>
<td><strong>5. Select an idea &amp; draw it.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>6. Measured drawings</strong></td>
<td></td>
</tr>
<tr>
<td><strong>[Homework for weekend</strong></td>
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</tr>
<tr>
<td><strong>Swap &amp; make an object from a drawing</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Day6 Saturday</strong></th>
<th><strong>Market exposure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>[Worksheet in Kannada - prompts questions things to look for]</td>
<td></td>
</tr>
<tr>
<td>Visit Saturday market in Coondapoor, look at products &amp; stalls, talk to customers and observe how other traders do. List of observations about stalls and products. Looking for new ideas, display, products, dealing with customers, good &amp; bad examples</td>
<td></td>
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<table>
<thead>
<tr>
<th><strong>Day7 Monday</strong></th>
<th><strong>1. Display ideas made over the weekend made, compare with drawings</strong></th>
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<tbody>
<tr>
<td><strong>2. Discuss &amp; critique ideas and ideas picked up from the market</strong></td>
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<tr>
<td><strong>3. Use this as a basis for emphasising user issues</strong></td>
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<td><strong>4. Ranges an intro [new card]</strong></td>
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<td><strong>5. Mixing of materials, collaborations?</strong></td>
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<td><strong>6. Brainstorm &amp; m-map possibilities</strong></td>
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<tr>
<th><strong>Day8 Tuesday</strong></th>
<th><strong>At Bee jadi: On the beach</strong></th>
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<tbody>
<tr>
<td><strong>1. Ideas exercises:</strong></td>
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<tr>
<td><strong>Pattern</strong></td>
<td></td>
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<tr>
<td>a) Dots</td>
<td></td>
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<td>b) Line</td>
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<tr>
<td>c) Pattern</td>
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<tr>
<td><strong>Motif</strong></td>
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<td>d) Sketching</td>
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<td>e) Applying</td>
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<tr>
<td><strong>2. Colour</strong></td>
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<tr>
<td>a) Collecting items from the beach</td>
<td></td>
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<tr>
<td>b) Creating colour pallets</td>
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<tr>
<td><strong>[Paints needed]</strong></td>
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</table>

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<thead>
<tr>
<th><strong>Day9</strong></th>
<th><strong>1. 2D/ 3D Sketching &amp; brainstorming</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>[2 groups]</strong></td>
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<tr>
<td><strong>2. Ideas development of new products</strong></td>
<td></td>
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<tr>
<td><strong>Making</strong> as part of prod. development – Led discussions</td>
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<tr>
<td><strong>3. How to choose a design voting matrices</strong></td>
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<tr>
<td>Working on samples of design rest of day</td>
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</tbody>
</table>

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<thead>
<tr>
<th><strong>Day10</strong></th>
<th><strong>1. Developing the chosen designs</strong></th>
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<tr>
<td><strong>2. Product clinics</strong></td>
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<tr>
<td><strong>3. Compiling of the final product ranges</strong></td>
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<tr>
<td><strong>4. Finishing the final designs rest of day…</strong></td>
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<tr>
<th><strong>Day11</strong></th>
<th><strong>1. Recap of the weeks exercises</strong></th>
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<tbody>
<tr>
<td><strong>2. Short discussions and practical key points for stalls &amp;</strong></td>
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<tr>
<td>Exhibitions.</td>
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<td>-------------------------------------------------</td>
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<tr>
<td>Final set up of the exhibition</td>
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<tr>
<td><strong>After lunch:</strong></td>
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<td><strong>Small exhibition</strong></td>
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<tr>
<td>VIP judges</td>
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<td>Small Prizes</td>
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<tr>
<td>[measuring tapes?]</td>
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<tr>
<td>wrap up…thanks etc</td>
<td></td>
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Appendix 6

A6 Training Cards: English version
The training cards are split into seven sets. These sets are not numbered 1-7 because they are designed to be used both in and out of sequence. In addition to the seven sets there are three sets of cards that support the training process: icebreakers, question cards and transformation cards. Each set is bound together with a ring, which allows individual cards to be removed if required.

The order that the cards are presented in the following section reflects the revision process as they were iteratively developed during the immersion period and the practicalities of designing, printing and laminating them locally.

What is design?
1. What is design?
2. A thinking process
3. An everyday task
4. Design is…
   4a Design is…for people
   4b Design is…problem solving
   4c..Design is…about looks
   4d..Design is…inventing
   4e..Design is…making something new
5. Design words
6. What is important?
7. You can design

- Design process
  1. The river exercise
  2. What are the different stages of the process?
  3. What affects the process?
  4. Where are your strengths?
  5. Loop back
  6. Your river

What is the problem?
1. Design is about solving problems
2. The first challenge is to work out what the need is
3. Ask yourself some questions to help you to think about the problem
4. Questions
5. A story
6. Using a Mandala 1
7. Using a Mandala 2
8. Drawing the problem
   8a Mind map diagram
   8b Flow diagram
9. Your design statement

Ideas
1. How do we get new ideas?
2. Start with what you already make
3. What did you learn?
4. 3D sketching
5. 3D sketching: transformation words
6. Sketching
7. Sketching new ideas: some tips
8. Group sketching 2D + 3D
9. What about decoration?
   9a Vase examples
10. Finding a new pattern
11. Once you have found a new pattern
12. Motifs and patterns
13. Using colour
14. Loop back
15. How do you decide which ideas to develop?
   15a A selection matrix

Users in the design process
1. Who is the design for?
2. Role-play: Task Analysis
3. Function analysis
4. User trials
5. Sizes
6. Exposure
7. What have we learned?

Making
1. Before making: make a drawing
   a. Example
   b. Making from a drawing
2. Why do you make it like this?
3. Question cards
4. Can it be made: in less stages?
5. Can it be made: faster?
6. Can it be made: better?
7. Can it be made: Cheaper?
8. Can it be made: More expensive?
9. How do you decide how much to sell it for?

Finding out about the market
1. What can we learn from the market?
2. Walking with your eyes open
3. Quality
4. Talking to customers
5. Look at books and magazines
6. Can you search the internet?
7. New markets
8. Loop back

Ice Breakers
1. A personal river
2. Setting the context: The tiger story
3. Setting the context: Pamboo the python
Appendix 6

4. Setting the context: Preparation

**Question Cards**

**Transformation Cards**
Cut, Merge, Remove, Add, Taller, Fatter, Squash Stretch,
What is design?

Design is:

1. Card
   - A thinking process
   - Every one who thinks about a problem and then plans how to solve it is using design skills

2. Card
   - Design is...
   - For people
   - Design is a process which you can use to find out about people’s needs and then produce solutions to meet the need.

Design is:

- Thinking
- Making
- Analysing
- Planning
- Listening
- Talking
- Solving
- Watching
- Thinking
- Listening
- Talking
- Solving
You can design!
Your task is to design a chair...

- What do you need to decide first?
  - What type of chair?
- What next?
  - How many legs?
  - Does it have a back?
  - or arms?

Each of these decisions form the design of the chair.

Design words
There are lots of words used to describe design

- Function
- Use
- Materials
- Form or shape
- How it looks (aesthetics)
- Colour
- Texture
- Pattern
- Motif

None of these are design... but together they help us describe the parts which make up a designed product.

Design is a process....

An everyday task
Think about a task you do everyday...like making tea...notice how many different things you do and how many choices you make...without thinking.

What is important?
Using the list on the last card decide which is the most important bit in the design of a product.

Is it the form, or the pattern is it the colour or the function?

You decide: draw a grid with the different design words on one axis and your names on the other. Give everyone 12 beans or seeds to vote with, what did each person think was most important? Discuss...
Design is...
Problem solving
Design is a process which you can use to think about problems and then find creative ways to solve them.

Design is...
About looks
Design is making things look really nice so that people will like them and want to buy them.

Design is...
inventing...
Design is about inventing better solutions to unsolved problems. Like the paper clip, or velcro, or...?

Design is...
Making something new
Design is a thinking and making process which we use to get new ideas and make new things.
The River Exercise:
The river is a good picture of process. We will use it to map the different stages of the design process from where you get ideas through to how you sell your products.

What affects the process?
- What are the good things?
  - Family support
  - Working well with others
  - A loan or cash injection
  - Training
- What can go wrong?
  - People stealing your ideas
  - Distractions
  - Not enough money
  - Lack of experience

What are the different stages of the process?
- Where does the process start?
  - What is the need for a new design?
  - Who needs it - what are they like?
  - What does the design need to do?
  - Getting ideas
  - Checking them with what you have learned
  - Making it
  - Selling it
  - Finding out more about the market

Where are your strengths?
- Which stages of the process are you happy with?
- Which stages would you like to get better?
  - Where do you think you need some training?
  - Where would you go for help?
Process Loop Back

At various stages of the process it is good to loop back and check with what you have learned earlier.

- Do your design solutions address the problem you identified?
- Does it meet the needs of the user?
- Can you learn things from the market which can help to form new ideas?
- This looping activity is essential to the design process
- Illustration: the rain water cycle.

Process Your River

How do you develop products?

Create a river which shows the stages you go through when you are developing a new product.

- Where do you get your ideas?
- What are the blocks and helps?

Do this in a group or on your own...
Design is about solving problems

Unless you know what the problem really is, it’s difficult to try to find ways to solve it.

How can you do this?

You need to ask the right questions.

The first challenge is to work out what the need is:

- What is the problem?
- How big is it?
- Where does it happen?
- When?

The second challenge is to keep an open mind.

There is never one solution to a problem. And the quality of the solutions we think of are often decided by how thoroughly we think about the problem in the first place.

Ask yourself some questions to help you to think about the problem

It’s often best to think about problems in a group, as it helps to have lots of different viewpoints.

These are a useful set of questions to help with this:

- What?
- Where?
- When?
- Who?
- Why?
- How?
- How much?
PROBLEM? Card 4

Questions???
- What is the problem?
  - What happens?
- When does it happen?
  - When did you notice it?
- Who does it affect?
  - Who fixed it before?
  - Who is going to pay for it?
- Why does it happen?
  - Why wasn't it fixed last time?
- Where does it happen?
  - Where is it OK?
- How did it happen?
  - How did you find out?
- How much did it cost last time?
  - How much time did it take?
  - How many people?

PROBLEM? Card 5

A story

What?: Lately my flower vases have not been selling so well.

When?: This started to happen about 2 months ago.

Why?: I don't really know - but it could have been the new batch of clay.

Who?: I noticed the surface of the pots was rougher than usual, my son noticed that the pots didn't sell so well and also the customers began to complain that the pots broke too easily.

Where?: My workshop, the kiln and the stall.

How?: Contamination in the clay? Poor firing New labour? I'm not sure?

How much?: 200 pots were fired - 10 have been returned but I don't know how many customers are unhappy and won't come back!

PROBLEM? Card 8

Drawing the problem.
Sometimes its helpful to draw or map the problem.

This can also be useful in getting your thoughts straight

PROBLEM? Card 8a

Drawing a problem like this can help you to see all of the things which affect a problem. [Each bubble is a different bit of the problem]

Try mapping everyone involved in a wedding, or all the stages and decisions that make up a product.
At the end of this set of cards you should be able to write a short statement which describes what the new design must do. Don’t decide what the solution is yet—just write down in list what it needs to do.

Example:
It must be able to be carried in one hand  [expand]

The Mandala helps us by giving us questions to answer and forcing us to see things from one point of view.

1. Split the group into four and sit around the mandala
2. Each group should use the four different words (positive, factual etc) to guide their thoughts
3. Now using the What, Who, cards as prompts explore the problem recording the responses of the different groups.

Sometimes its helpful to use different ways to help us think about problems.

Drawing a problem like this can help to organise you thoughts. Each bubble is a different stage of the problem or process.

Use this type of drawing to think about the everyday task.
How to get new ideas...

There are lots of different ways to get new ideas. It is important to use a number of different tools and techniques - don't just stick to one favorite! The brain needs help to break out of old patterns and begin to think in new ways. This is the key to new ideas.

Start with what you already make.

Take one of your products
- It could be the one which doesn't sell
- Or it could be your best seller

And talk to people about it...
- Talk to customers, friends and family in fact talk to anyone

What should you say?
Ask them
- If they would buy it?
- If they would change it?
- If it is the right size, shape, colour?
- What they like & don't like about it?

What did you learn?

Can one of your products be changed?

Can you make a new product which the customer wants to buy?

Make a note of what the customers said. Does this apply to other products that you make?
IDEAS Card 6
Sketching
Drawing is a helpful way to help work out new ideas. The drawings don’t have to look beautiful as long as you understand them.

Use a book to keep all your drawings in one place. So You can go back to them for ideas. Or Show them to customers as an idea for a product for them.

IDEAS Card 4
3D Sketching
3D sketching is just like drawing on paper. It’s just making models of ideas quickly so you can see if they are OK. These small models don’t have to look beautiful as long as you understand them. You can make them full size or a smaller version.

One problem is that you can’t easily keep them, they take up space; but you could photograph them. So You can go back to them for ideas. Or Show them to customers as an idea for a product for them.

IDEAS Card 5
3D Sketching
Transformation Words
One helpful way to try other ideas in 3D once you have made a model is to use these words.

- Bigger
- Taller
- Stretch
- Add
- Merge
- Multiply
- Rotate
- Cut
- Combine
- Eliminate
- Reverse

- Smaller
- Fatter
- Squash
- Subtract
- Divide
- Repeat
- Rearrange
- Remove
- Separate
- Substitute
- Flatten

- Think of your own words....

IDEAS Card 7
Sketching new ideas
Some tips...

- Make a drawing of a new idea
- Do you like it?
- Make a new drawing changing the bits you are not sure about
- Use the transformation words to try new ideas
- Ask yourself if it would be easy to make?
- Try to keep the drawings simple. Make one drawing of one idea or thought
Group Sketching 2D+3D

Sometimes it is helpful to work on getting ideas in a group.

Thinking about your design statement and each make a 2D or 3D sketch of one way to answer the statement.

When you have each done one sketch/model put them in the middle and look at them. Now using ideas you get from looking at other people’s sketches/models each make another and another...

Together you should have many more ideas than you would have had on your own...

A Selection Matrix

Using beans or counters, vote for the products, answering each of the questions. E.g. If it costs a lot to make give it only one or two votes, but if it will sell for a lot give it more votes. Discuss the totals. They should help you decide what to develop and test in the market.

How do you decide which ideas to develop?

Using a matrix or grid is one helpful way.

You need to decide the questions you want to ask about each product, i.e.

- How much will it cost to make?
- How much will it sell for?
- How many will sell?
- What are the transport issues?
- Do you like it?

[pretend to be the customer, ask other people]

Now create a matrix like the one on the next card

Loop Back

Once you have got some ideas check back to the list you wrote when you were first thinking about the problem.

- Remind yourself what you decided
- Are the ideas aimed at the same people?
Ideas Card 9
What about decoration?
Pattern, motifs, textures?
Use the patterns below and apply them in different ways to simple drawings of your products. Stripes, patches, borders etc.

Ideas Card 9a

Ideas Card 10
Finding a new pattern
A simple way to discover new patterns.

Ideas Card 13
Using Colour
The use of colour on a product is very important. It can make the difference between a product’s success and its failure.

One way to help to put together a good set of colours which complement each other is to make a colour range based on a theme.

Go out and collect things; cloth, flowers, anything... which have colours which remind you of a theme. These might be: Diwali, Monsoon, Harvest, Holi, Spring, Summer, can you think of any others?

Once you have collected the things, paint colour patches of all the colours you see then choose a range of 6 that you think work well together and use them on a range of products.
<table>
<thead>
<tr>
<th>Card 11</th>
<th>Card 12</th>
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<tbody>
<tr>
<td><strong>IDEAS</strong>&lt;br&gt;Once you have found a new pattern&lt;br&gt;Try using some simple techniques to make a range of more regular patterns.</td>
<td><strong>IDEAS</strong>&lt;br&gt;Motifs &amp; patterns&lt;br&gt;Ideas for new motifs and patterns can be found all around us.&lt;br&gt;Walk around the area and look for things which give you ideas for patterns or motifs. Flowers &amp; plants Buildings Vehicles&lt;br&gt;Draw them in your sketch book and then sit and make them into patterns by simplifying them.&lt;br&gt;How will you apply these new motifs and patterns to your products?</td>
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<tr>
<th>Mirror</th>
<th>Repeat</th>
<th>Scale</th>
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| Card 20 |
**Answer the 'who' in more detail:**

Who is the design for?

- Find out as much as you can about this group of people:
  - What do they like?
  - What other things do they buy?
  - Take pictures of them
  - Where do they live?

- Try a range of techniques to explore user needs.

These exercises are designed to put the user back in the center of the design process.

---

**Role play: Task analysis**

Act out a familiar task

Notice all the product that are used

- When are they used?
- Are there different types of use?
- How are they stored?
- How are they cleaned?

---

**Function Analysis**

How does it work? [go a little deeper]

- Does it work well?
  - Does the lid open?
  - Can your fingers fit in the handle when wet?
  - Is it too heavy when it's full?

Notice how it works

- When you hold it
- When you put it down
- When you store it
- When you clean it

- When does it not work well?
- How can it be improved?

---

**User trials**

Get other people to use it

- Get people of different:
  - Sizes
  - Ages
  - Men and Women
  - Background (Caste?)
- Use the questions from the last card

Notice when they use the product

- Can they work out how to use it without you telling them?
- Is it comfortable to use?
- Is it too large or small?
- How about when their hands are wet?
- What do they think?
Appendix 6

Users in the Design process

Sizes:

What size should the product be?

- How can I find out what size to make it?
  - Size can be related to function
    - Does it hold the right amount of liquid?
  - Size is also related to the user
    - What size are their hands?
    - How strong are they - can they lift it?

- How to work it out
  - Get people to try different sizes of handles
  - Ask them what is the most comfortable
  - Ask them is it easy to use?
  - Is it easy to lift the lid?

Exposure

Getting to know the user

- Where does the user live?
  - Is this like your home or different?
  - What is different?
  - Does this tell you more about the problem and possible solutions?

- What kind of things do they buy?

- What kind of clothes do they wear?
  - What is different?
  - Does this give you any new product ideas?

What have we learned?

We have noticed that there are many different users for products

Each of them require slightly different things

Knowing more about the users of our products can help us to design them better

Products which meet the needs of the user often sell better and customers tend to come back.

How does this information change your design statement?
# Appendix 6

## Making Card 9

### How do you decide how much to sell it for?

The price of a product should include enough money to cover the following things...

- The cost of raw materials
- The cost of your labour
- The cost of any transport
- Any other costs like taxes

If the price doesn't include money to cover these things you could be losing money on each sale...

## Making Card 1

### Before Making:

Make a drawing.

If you make a simple drawing of everything you make it is easier to go back to it and make it again. Drawings should include:

- Sizes of the product
- What its made from
- Date and original order details
- Detail of any pattern, colour or decoration.

It is often easier to draw this from the side

## Making Card 1b

### Making from a drawing:

The ultimate test of a drawing is if someone else can make the product you have drawn from the information you have given.

The first step of the exercise is to first design a product and make a drawing with all the information you think is needed to make it.

Then...

Swap drawings and try to make what the other person has drawn.

## Making Card 1a

### Before Making:

Make a drawing.

![Diagram of a product with dimensions:

- Thickness: 4 mm
- Flower motif: 20 mm
- 3 lines of dot pattern: 13 mm
- Height: 65 mm
- Diameter: 45 mm
]}
Why do you make it like this?
Is there a better way?

- Thinking about how we make things and learning from how others make can sometimes help us to make products in less time and which are of better quality.

- Try to separate the making process into steps

The following exercises are designed to help you to analyze your making process to see if it can be improved.

Question cards
The following prompt cards will ask different questions

They are meant to prompt discussions about the making process using the tools you have learned in the ideas cards.

Why not draw a diagram of the making process?

Can it be made... In less stages?
- List or draw out the stages you go through to make an item.
- Without reducing quality are there stages that can be cut out?
- Is there a market for a cheaper product with less detail?
- Do all the stages have to be made by you?
- Can you get others to make them?

Can it be made... Faster?
- Speed is not always a good thing but when you make something, the time you spend on it should relate to how much the product is worth.

- How can it be made faster?
  - Can parts of it be moulded?
  - Is it faster to make parts in bulk and join them later?
Making Card 6

Can it be made...
Better?
Can the quality be improved?

How can the quality of your products be improved?

- How about surface finish?
- Or consistent colour?
- Should they all be the same size or shape?

Remember... Handmade products are supposed to look unique, but that doesn't mean lower quality.

Making Card 8

Can it be made
More expensive?

- Can you add value to the product without adding to your making costs?
- Or if you are really good can you reduce your making costs and increase the price you sell it for?
- What does the customer want?
- It doesn't always have to cost you more to make...

Making Card 7

Can it be made
Cheaper?

- How much does this product cost you to make?
- Do you know?
  - How much does the material cost?
  - How much time does it take?
  - Are there 2 or 3 stage of making?
  - How much does this time cost?
  - What about transport costs?
  - What about your time to sell it?

It's OK...most of you won’t know the answers to these questions...
But if you don't know...how can you workout if the price you sell for will cover your costs?
What can we learn from the market?

This set of cards will give you ideas on how to find out more about the market.

- What your customers wants
- How to get ideas for new products

Finding out about the market

Walking with your eyes open

Take a walk through:
- Local markets
- Town or City shops
- Craft fairs

What can you learn?
- Can you get ideas for new products?
- New ways to decorate your products?
- Packaging ideas?
- Stall layout?
- Ways of dealing with customers?

Talking to customers

Talking to customers isn't always easy, but they are the best way to find out what people want to buy.

- How much do you know about the people who buy your products?
- Why do you think people buy your products?
- Remember to make a note of what they say.
Can you search the internet?

The internet has a vast collection of information. You just need to know how to look for it.

- Use a search engine like Google [www.google.com]
- Decide what you want to search for and work out the words in English

Look at books and magazines

- Magazines often show pictures of people's homes. What products can you see?
- Can you get ideas from looking at books on nature, or architecture or historical artefacts?
- Are there pictures of craft products in other materials which give you ideas?

New Markets

Sometimes you can find a new market for an old product or even an old market for a new product.

Use this grid to prompt you to ask questions about your products as you study the market.

Concentrate on the diagonal arrows.

Loop Back

Once you have got some ideas from the market, check back to the list you wrote when you were first thinking about the problem.

- Remind yourself what you decided.
- What new ideas can be fed back into the process?
- Can they be the start of any new product ideas?
Quality

Take note of how people decide to buy products:

- Do they spend more money on better quality products?
- What can we learn from this?

When you go to a wedding... Do you wear your work clothes? No you get dressed in your best clothes. So people like products which look better and they tend to pay a little more for them.
**A Personal River Exercise:**

Each person is asked to create a personal river or flow chart to show the various stages or twists and turns of their life.

- Don't ask for too much detail
- Use simple drawings to add interest

This exercise is excellent to help everyone get to know each other [display the maps]

The facilitator should demonstrate with a rapid version of his life story.

A good way to end the exercise is to ask what's next what are their goals and dreams

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**The Tiger story:**

Three men were shown a room with two doors. They were told that behind one door was wealth beyond their wildest dreams - gold, silver, gems etc. Behind the other was a hungry man eating tiger.

They had to choose and open a door.

- The first man refused to choose and left.
- The second man - a good strategic planner, hauled out his computer, analyzed probability data, did some risk analyses, plotted data, produced charts, created scenarios and after much deliberation, opened one of the doors.
- He was eaten by a low probability man eating tiger.

- The third man - and of course the third man is always the winner, spent his time learning to tame tigers.

Learning to tame the tiger takes time, and the trouble is that learning is an internal process and mostly not visible.

And time is something that most of us do not have...and often have to keep running to stay in the same spot.

So learn to tame the tiger Learn to live, survive and embrace perpetual and continuous change.

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**Setting the context**

**Preparation**

Value is something the whole world is concerned with today. Most things have a monetary, emotional, psychological and material value. All these things can be evaluated and improved upon. But all products and services also have an intangible value which is hard to describe and quantify. What is this value?

Most of us are here in this work shop to gain something. Apart from the obvious benefits, we will also hopefully gain some value in return for investing our time and efforts. Can we try and understand this gain?

Think about two women feeding their children

Think about two people sweeping a room

Think about two people telling the same story

There will invariably be differences. We will always choose one over the other. What makes one action better?

In the end, the children are fed, the rooms are swept and the story is heard and enjoyed. Yet, there is a difference... What is this difference?

Whenever we do something or make something, we put in a part of ourselves into the task or product. It follows that the more we nurture ourselves, invest in ourselves, the more there is to invest in our work. We need to periodically replenish ourselves, invest in ourselves, the more there is to invest in our work. We need to periodically replenish ourselves, the same way we replenish our bodies with food and rest. Hopefully this workshop will provide that pause, that stimulus, that space to recharge and emerge fresh.

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**Value**

This story shows that we need to be aware of change and react to it

A big red coral python, Pamboo lived in a zoo. He slept all day and enjoyed the meals the zoo keepers brought him. All the visitors who came to see him were awe struck at his magnificent size and color.

He ignored his neighbors who were some smaller snakes which lived in the next box, which was separated from his box by a thick sheet of glass. One day the zoo people put in some small frogs in the box.

The big snake, Pamboo suddenly woke up and saw these tasty little creatures jumping around a little distance from him. He narrowed his eyes and moved forward slowly to catch one. But since he couldn't see the glass, all he did was to hit his head on it. He got angry thinking that these creatures were playing a trick on him and hissed loudly and threw his whole body at them. Whaam, he hit the glass. Enraged, he hit the glass again and again, until exhausted, he gave up. The zoo keepers brought his evening meal, and he forgot about the pesky creatures next to him.

The next day he tried half heartedly and finally gave up, thinking that these creatures had some special abilities he couldn't understand. He went back to his old life.

One day, in order to give him more space, the zoo keepers took out the glass, and all the little frogs hopped all around him. But Pamboo refused to even dart his forked tongue, since he had already tried and failed. And visitors that day were amused by the sight of those frogs playing around the deadly snake.
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Appendix 7

A7 Evaluation and feedback on the final field experiment

This section on evaluation and feedback techniques specifically relates to the final field experiment, which took place in Coondapoor in western Karnataka in June 2005. This experiment was chosen as the main context to collect feedback and evaluation, as it was the field experiment based on the most developed training strategies. The primary means of evaluating the experiment was a series of informal interviews conducted by a third party researcher and an evaluation wheel, which is explained below.

A7.1 Mood meters

In addition to this final evaluation, daily monitoring was done using ‘mood meters’. This method provided the participants with a simple visual tool to monitor how they felt about each day of the workshop. The evaluation technique is taken from Chamber’s participatory workshops book (Chambers, 2002a p42).

In this evaluation tool, the participants are asked to place a tick next to either a happy, neutral or a sad face for each day of the workshop. Time was given during the lunch and tea breaks when I was not in the training venue to ensure the participants did not feel pressured to answer in a positive manner and to allow for anonymity. The happy face represented ‘very useful’, the neutral face ‘OK’ and the sad face ‘not useful’. This may seem a trivial tool, but the literature would suggest that an ongoing day-by-day evaluation of the workshop was helpful as a means of adjusting the training content and as a stimulus for ongoing feedback.

A7.2 Evaluation

Evaluation of the workshop was carried out using visual and verbal methods:

A6.2.1 Semi-structured individual interviews with half of the participants.

- Carried out by an independent person.
- Participants interviewed were from a range of trades, different statuses (trainers, managers, and workers) and different genders.
- Each interview was between fifteen and twenty minutes.
Six people were interviewed out of the eleven participants; two of these were trainers and one was the assistant manager of the centre (Namma Bhoomi).

The interview was introduced as a tool to help develop ideas for future design training and positive and negative comments were encouraged. The interviews were conducted by an independent third party, Ms R. Booth\(^3\), and were facilitated by a translator. The interviewees were engaged in a translated conversation, which was guided by the following guidelines

**Interview questions**

*Participant background:*
- Name
- Age
- Gender
- Current role
- Education
- Previous workshops/training
- Previous experience of thinking/training about design

*Background to the workshop:*
- Why did you attend this workshop?
- What were your expectations of the workshop?

*Usefulness of the workshop:*
- Were your expectations met?
- What did you learn from the workshop?
- Do you think that you will be able to apply what you have learnt to your own work? (In what way?)

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\(^3\) The opportunity to ask Ms. Booth to help in this capacity came about because she visited my family and I in India. I asked her to help with these interviews because of her development qualification (MSc) and extensive experience in community development in a variety of contexts.
Appendix 7

Enjoyment of the workshop:
- Did you enjoy the workshop?
- What did you most/least enjoy about the workshop?

Participation/empowerment:
- Were you able to express your opinions and actively participate in the workshop?
- Can you give an example of when you were able to actively participate?
- Did you feel that your opinions and past experience were valued?

Logistics of the workshop:
- Times of the workshop
- Length of the workshop
- Size of the group
- Mix of the group

Training/facilitation:
- How did you feel about style of the workshop?
- How easy/difficult was it to understand tasks, activities and explanations?

Any other thoughts/comments?

A7.3 Interview summary

Participant background:
- The age range was 17-57.
- The majority had no formal training in their craft specialism.
- Only one of the interviewees (the centre manager) had previously been involved with any design related training.
- Another of the trainers interviewed stated that this was the first time he had begun to think about design.
Background to the workshop:

- The responses in this section ranged from interviewees who had little expectation of the course who had attended due to mild interest, to others who wanted to know more about design. Two had been asked to attend and one did not understand the workshop was about design, but found it relevant once he had arrived.

Usefulness of the workshop:

- All of the interviewees identified at least one thing they found useful. Two reported that they had ideas for new products, four reported that they had learnt practical knowledge about marketing, one reported that he felt more confident to design simple products and another felt he now understood the need to develop a range of products in response to the market.
- Mind mapping as a communication and problem solving tool was mentioned as being useful by half of the interviewees and one in particular, an agricultural trainer, was very enthusiastic about its potential impact on his communication with his trainees.

Enjoyment of the workshop:

- All the interviewees reported that they enjoyed the workshop, especially the ice-breaker games and challenges. This was a new aspect of training that they had not encountered before.

Participation/empowerment:

- Each of the interviewees reported having opportunities to actively engage with the training and express their own ideas. They mentioned the mind mapping and group problem-identification and solving activities in particular, with the younger interviewees further emphasising the value of this aspect.

Logistics of the workshop:

- Regarding the planning and logistics of the workshop, five of the six interviewees felt they had benefited from the mixed nature of the participants. One commented that the format of half days was helpful and less disruptive and another suggested that a full day format would have been better. Half of the participants thought the workshop was well planned and structured and one commented that the workshop was too short.
Appendix 7

**Training/facilitation:**

- When asked about the training and facilitation style of the workshop and how easy it was to understand, half of the interviewees reported that it was easy to understand. Two mentioned they liked the participatory analysis exercise in particular and two others said they liked the teaching via mind maps. One mentioned that he liked the range of different activities in the training.

**Any other thoughts/comments?**

- Only two out of the six had other comments: one would have liked more time to experiment with design for new products and the other would have liked a more practical, hands on approach from the facilitator, with specific input into his stone carving work.

**A7.4 Individual contribution to an evaluation wheel**

This tool allows all participants to quickly convey their opinions on a number of aspects of the course (style, content, length of course, enjoyment). Private time was given to complete the wheel.

As part of the final day, an evaluation wheel exercise was used. This exercise was taken from Chamber’s participatory workshop book (Chambers, 2002a p45). The tool requires the evaluating participant to place a cross somewhere along the axis formed by the imaginary spokes of a wheel. Generally, the closer the cross is to the centre, the more positive the response and vice versa. The mechanics of this type of evaluation method must be explained in detail before the participants attempt to fill it in, especially as it is good practice for the facilitator to be away from the training venue while the exercise is being completed.

In this case the criteria evaluated were:

- Length? (How do you rate the length of the workshop?)
- Space? (How do you rate the workshop space?)
- Teaching? (How do you rate the teaching of the facilitator?)
- Useful? (Do you think you will find the workshop useful?)
- Like to know more? (Would you like to know more about design?)
- Expectations? (Were your expectations met or exceeded?)
- Information? (How do you rate the information supplied?)
- Enjoy? (Did you enjoy the workshop?)
Once the wheel was completed, the majority of the crosses fell close to the centre of the wheel denoting general satisfaction with the workshop, with a healthy few falling in the mid range. This result was confirmed by the interview process described above.
Appendix 8

Appendix 8

Published papers:

Peripheral Vision
Design Issues
Volume XIX Number 4
Autumn 2003
Pages 44-56

A critique of design methodologies appropriate to private sector activity in development.
Development in Practice
Volume 15
Numbers 3 and 4
June 2005
Pages 451-461
A8.1

Peripheral Vision:

An Interview with Gui Bonsiepe charting a lifetime of commitment to design empowerment.

Gui Bonsiepe: Professor of Information Design
Escola Superior de Desenho Industrial (ESDI) Brazil

Introduction

This article documents a staged interview with Gui Bonsiepe conducted by James Fathers. The interview attempts to shed some light on the career of this figure who has been at the heart of the discourse in design in a development context and yet is little known in the mainstream Western design literature. The purpose of the interview was to explore some of the thoughts, methods and motives behind a career which has spanned the last 40 years and has largely been devoted to addressing the challenges of design in the context of the periphery.

Bonsiepe was trained at the Hochschule für Gestaltung in Ulm (HfG Ulm) in the second half of the 1950’s. He then went on to teach and design there, from 1960 to 1968, alongside his friend and mentor Tomás Maldonado. When the institution closed in 1968 he made the decision to move to Chile and so began his 35-year odyssey with design in the context of the periphery and, in particular, in Latin America.

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4 Professor Bonsiepe kindly agreed to this interview a part of the programme of the Mind the Map conference hosted by Istanbul Technical University and Kent Institute of Art & Design in Istanbul, Turkey in July 2002.

5 James Fathers is a senior lecturer at the University of Wales Institute Cardiff. He has an active research interest in the role of design in the context of development

6 The term periphery in the context of this article refers to those countries commonly termed developing countries. The term was adopted by Bonsiepe as a more appropriate way of describing these geographic areas & peoples in a paper for the Design for Need Conference in 1976. Precariousness & Ambiguity: Industrial Design in Dependent Countries, In Design for Need. (Editors: Bicknell, J & Mc McQiston., L), Pergamon Press, London.

Appendix 8

The Interview

Q1: You are well known for your writings and experiences of designing in developing countries especially in the 1970's & 80's. Can you describe why you first became interested in the role of design in development?

I studied at the HfG Ulm in the 50's where we had a considerable number of foreign students particularly from Latin America. So this was my first contact because, similar to the rest of Europeans at least at that time, I didn't know anything about Latin American History or Culture. Then in 1964, I was invited to Argentina by my teacher, friend and intellectual mentor Tomás Maldonado, whom I consider one of the most important design theoreticians of the 20th Century – a real giant, though his works might not be known widely outside the Spanish and Italian language context.

I arrived in Buenos Aires, planned to stay for two weeks and stayed for two months. I was fascinated by the cosmopolitan climate of the city – a city in which you could go to the cinema at any time of the day or night, if you wanted! I hadn't found this to be the case in Germany, least of all in Ulm, a very small provincial town. So this was my first contact, purely personal, without any professional intentions.

In 1966, I travelled again to Argentina in order to teach a course in packaging design & packaging technology. The course was organised by the International Labour Organisation (ILO) who contracted me as a consultant. At that time the United Nations International Development Organisation UNIDO did not yet exist. So step-by-step my encounters with the periphery started to get more intensive.

In 1968 I decided to move to Latin America. My move to Chile coincided with the closure of HfG Ulm, though it was not motivated by this abortion of one of the most influential experiments in design education in the second half of the last century. I had the chance to go to Milano, which at that time was already a very attractive place to deal with design. But I accepted an alternative offer again by the ILO to go to Chile, to work there as a designer on a project for the development of small and medium scale industries. In Chile I got into the real world.

A decisive influence on this decision had been my Argentinean wife. When we discussed
these options, either to go to Milan or Chile, she told me to opt for adventure. I didn't know Chile at that time, I didn't even speak Spanish. She said simply, look, in Europe everything is already done in design, let's go outside where there are new challenges.

Q1a: In 1973 UNIDO commissioned you to write the report – 'Development through Design' how did this come about?

At the beginning of the 70's, ICSID our international professional organisation became more and more interested in what was happening in Developing Countries - we didn't have yet the name 'Peripheral Countries' and Josine des Cressionières, the Belgian secretary general of ICSID at that time, approached me to write this report. As far as I remember there was a draft paper already written by an American designer, Nathan Shapira, but this paper had certain shortcomings, mainly because this colleague didn't have substantial first-hand experiences in a developing country context.

The deadline was six weeks – a very short deadline taking into account that the internet did not exist at that time. I collected whatever materials I could get hold of, from India, Cuba, Chile, Brazil and Argentina and presented this as a working paper to an expert meeting in Vienna, where for the first time, an international organisation explicitly dealt with Industrial Design policy for those countries which were called at that time 'developing countries'. This draft was then transformed onto a guideline paper for the industrial design policy of UNIDO.

Q2a: What are your most significant memories of your experiences designing in Chile & Argentina?

This is a very personal question and I am not particularly keen on getting involved in my own history. But since you asked the question, the most negative memory I still have of my stay in Latin America, was the 11th September 1973 when the military coup d'état was implemented with help from outside secret services and covert military support against the democratically elected government of Salvador Allende. As you might know, this coup d'état with its tortures, killings, and 'disappearances' was officially legitimised by declaring that the "occidental and Christian values of our culture had to be defended." So much for the values of our society. This was the negative side.

I then moved to Argentina, for obvious reasons. I had the luck of having a German passport, otherwise if I had had a Brazilian or Argentinean passport, I probably wouldn't be sitting here talking with you. It took me several months to get over the traumatic Chilean
experience and in nine months I wrote the book "Theory and Practice of Industrial Design". Written in German, it was published in Italy in 1975 and later translated into Spanish and Portuguese.

On the positive side, I had the good luck of meeting & getting acquainted with and then getting to know a group of very passionate design students who had just finished or were finishing their university courses. These courses did not fulfil their promise: to educate industrial designers. Their titles were something like 'craftsman in decoration' which was somewhat distant from 'industrial design' and still dominated by an interpretation of design as a kind of art – or worse, applied art! Furthermore, I found positive resonance within higher government officials for the design approach that I practised. This was for me, a very fertile environment.

The political experience I had gained in Europe was limited. I was interested of course in political issues which was inevitable in the fervent climate of the 60's. During my education in Ulm, reading the books on critical theory such as Ernst Bloch, Theodor W Adorno, Walter Benjamin, Herbert Marcuse & Jürgen Habermas as part of our seminars, was a must. So, I had some critical consciousness of what was going on and what makes economies tick, but I did not have any experience of a direct relationship between professional work and the socio-political environment or a socio-political programme. In Chile this was possible to map professional practice to a socio-political programme.

Q3: You are quoted in an article in 1976 by S Newby, as being a 'Parachutist from Ulm'. This phrase has often been used in a negative way to describe western intervention in a developing country. What steps did you take to limit any negative influence caused by your 'landing' in Chile after your experiences at Ulm?

I do not know Mr Newby or his article. I am not sure what motivated him to make this assessment but if my landing or Parachuting into Chile is not to his preferences, then its his problem, not mine. Perhaps he wanted to insinuate a politically motivated disagreement and would have preferred me to have arrived in a Rolls Royce in 1975 at the palace of Mr Pinochet, a person with whom I definitely would not share a dinner! I assume its the ulmian design approach that irritates the author and that he wants to disqualify – and not my supposedly Parachuting. By the way, I was invited to go to Chile and did not – and do not – favour any idea about 'intervention'.

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Now to the negative influences, I am not quite sure about what these might be. The pragmatic rational ‘ulmian’ approach that made it possible to draw a profile of the industrial designer and to consolidate his education apparently met a latent need. Otherwise the resonance would not have been as strong as it has been. There seems to exist a hidden romantic notion of the Periphery: that it should maintain its status of pristine purity that would be contaminated by any outside contact. It might be advisable to distinguish between influence and influence. I don't see anything negative in the endeavour to contribute to a project of social emancipation. I did not come as a missionary to Latin America. What I did was to provide an operational base for concrete professional design action. People in peripheral countries, and Latin Americans particularly, are not as naive as sometimes is supposed. They are critical and demanding. I offered some operational tools in order to do product design, from agricultural machinery to wooden toys for children and low cost furniture, and get rid of the ballast of art tradition and art theory. This operational know-how was not provided by the Universities at that time because the teachers on these courses often did not have first hand design experience. I wonder how you can teach design if you don't practice design. For this reason there was a vacuum and a very fertile breeding ground and thus receptivity for any relevant information and methodological tools, which would help, resolve practical design problems.

Q4: In the Design for Need conference at the Royal College of Art in 1976 you made the statement "My Summary, based on eight years of continuous work in peripheral countries 'Design for dependent countries' should read 'Design in dependent countries' or 'Design by dependent countries'. The centre does not possess the universal magic formulae of industrial design which have to be propagated to the inhabitants of the periphery whom the intelligence agencies' ideologically conceives as...[the]...underdeveloped..."  

Do you still hold this view?

To a certain degree, yes. I would not move one millimetre from the position or the statement that, according to my opinion, design should be done in the periphery and not for the periphery as the result of some kind of benevolent paternalistic attitude of the centre to these countries. I insist and have always insisted on local design practice. Design

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9 Bonsiepe, G. (1976) ibid
problems will only be resolved in the local context and not by outsiders coming in for a stop-over visit. This typifies one of the great disadvantages of short-term consultancy jobs, with people flying-in from the central countries with very little knowledge about the local context and believing that issues can be resolved by remote control. To cite one example: the deep present-day economic and political crisis in Argentina is well known. Now if the International Monetary Fund sends a specialist to Argentina to deal with the question of foreign debt who does not speak Spanish, then this is quite revealing of the ignorance and arrogance with which international institutions often confront local realities that are different from the view from an office window in Washington or New York.

Q5: At this same time Victor Papanek was writing about similar issues. Design historians have put the two of you together as the key figures in what has become known as the "Design for Need movement." Did you discuss your theories together or collaborate on any projects? How would you feel your ideas differ from Papanek?

In 1964, when I spent one semester as guest professor in basic design in Carnegie Mellon University, Victor Papanek invited me to go to North Carolina where he was teaching industrial design to show me the design approach he had developed. I had high esteem for Victor Papanek because he dared to swim against the stream and against the complacency in design practice and design education. For this courage he was heavily punished. For a number of years he was almost prohibited from speaking publicly at industrial design conferences in the USA. However, my esteem for Papanek did not prevent me from writing a polemical review of his book 'Design for the Real World'.

He had attacked a sensitive issue but his approach and the answers he was ready to give seemed to me not adequate. I would say that he had little understanding of the political economy of design. As is known, he became fascinated by the 'do it yourself' design approach and did not have a strong interest in industrialisation and the development of economies. He opted for design services outside of the business and industrial enterprise context, which I considered of limited effectiveness like that of a maverick. For this reason I did not share his views but this does not mean that I have underestimated his contribution to the field. The receptivity of his book "Design for the Real World" which was translated into many languages shows that he had touched real issues. But in answer to your question we never developed projects together. We occasionally met at conferences. I also wrote a

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review of his book 'The Green Imperative.'\textsuperscript{11} I think this was his last book. After this we lost contact.

**Q6:** The Design for Need movement seemed to draw on a collective desire in the design profession to do something about social need. In hind–site can you offer any suggestions as to why this movement appeared to founder?

I wouldn't say that it foundered, because it didn't take off in the first place. It was an attempt to find some answers as a profession to the needs of the majority of the world population which we felt were left out. This movement, sometimes also called the 'alternative technology movement', changed into the 'appropriate technology movement' and was promoted particularly in Great Britain, where they had an office with consultants offering services in appropriate technology especially to African and some Asian countries. Later in the decade this activity lost momentum and went into oblivion. I suppose the reasons are the following; the ‘Appropriate Technology’ and ‘Design for Need Movement’ could never quite get away from the prejudice (and it is a prejudice really) that it deals only with second rate and third rate technology. It seemed to continue with a class distinction between two types of technology: high-tech for the central countries and low-tech do-it-yourself technology for the periphery. The appropriate technology movement in the 80's was influenced by the writings of EF Schumacher, who wrote 'Small is Beautiful.' Increasingly the main protagonists of this movement were coming from the fields of engineering and economics. There were hardly any industrial designers as far as I know. Designers played a marginal role in these efforts to do something about design in what was at that time called developing countries.

**Q7:** In a paper in 1993, Pauline Madge quotes correspondence with you where you reflect on the design movement in the 1970's\textsuperscript{12}

"I consider it a merit of the representatives of the appropriate technology movements to have asked some uneasy questions about industrialisation and its effect on the Third World; furthermore, of having shifted attention to the rural (poor) population in the Seventies there still was the hope that a different social organisation would give rise to different products and a different mode of consumption. This hope has today been shattered"

The statement that hope is today shattered is a very strong one. Can you explain the


thoughts that led to this conclusion?
You see in the 1960's & 70's and even up into the 80's there was still a vague hope called the 'third way' between the eastern block or socialist countries and the Western block or capitalist countries. With the demise of the former socialist countries or the eastern block, at this moment there seems to be no alternative outside the general configuration of capitalism. The only alternative nowadays can be found within the system of globalisation, which we will perhaps talk about later.

So, taking up the notion of 'shattered hope': I am by temperament and by decision not a depressive character. Rather I would characterise my self as a constructive pessimist and therefore I don't agree at all with the well-known ‘TINA’ dictum by Margaret Thatcher (There Is No Alternative). I would claim there are always alternatives.

Q8: In recent years you have not written very much on the issues relating to role of design in a development context. What triggered this apparent shift in focus?
I worked in Brazil from 1981-87 as a consultant in the National Council for Scientific and Technological Development participating as designer in the formulation of an industrial development policy. There, however, I had only limited access to computer technology. The technological revolution - information/computer technology - attracted my interest. I perceived that there was coming up a radical change and enormous challenge for designers. One day I got a letter with an offer to work as a designer in a software house in Berkeley. I took this offer and started to work there in this new field of technology, which I felt was of utter importance - of a similar importance as the invention of moving letters for the printing press in the 15th Century.

If I could have got access to computers and software development from a user's perspective in Brazil, I probably would have remained there, but I didn't and so I moved to the States. And there I worked for three years. The practical work as a designer in a software house, permitted me to re-interpret design, getting rid of the traditional topic of form & function and developing an interpretation of what design is all about, based on language and action theory.

Alongside this I rediscovered the work of Heidegger. As a German it was very difficult for me to read Heidegger after the devastating critique by Theodor Adorno.
"The Jargon of Authenticity". However in Berkeley I was fortunate to be able to assist in some philosophy conversations amongst others with Hubert Dreyfus. I got a better understanding of Heidegger through the English translation and interpretation. Taking some notions from Heidegger and computer sciences I developed a re-interpretation of design as the domain of the interface where the interaction between users and tools is structured. This I consider not a minor contribution to design theory.

Having said all this, let me just add one thing. My interest in peripheral countries has not diminished; on the contrary it has increased due to their economic decline and to what I consider to be the symptoms of the end of a uni-dimensional socio-economic model. In my last book available in English\(^{13}\), I assess the role of design in the Centre from the perspective of the Periphery and vice versa. As well as this I have established, created and co-ordinated the masters programme in Information Design at the University of the Americas Cholula, Puebla Mexico and continue to work on this programme. I live part time in Brazil where my main base of operation is located, returning to Latin America whenever my teaching obligations in Germany permit me to do so.\(^{14}\)

Q10: It is well known that in the 1970's & 80's you were a significant influence in the 'Design for Need Movement'. Despite this prominence it has been said that you have received little or no recognition as a designer and in fact in the 1980's you are quoted as saying this is due in part to a political agenda.

Both Er & Langrish and Madge state that despite Bonsiepe's involvement in the area since 1968 he is still relatively unknown in design circles and has remained marginal in the design literature. The reasons given are "because the subject itself did not attract any interest within a design world dominated by theoretical underdevelopment and self-centred design discourse"\(^{15}\) and "because the issue of design in developing countries has increasingly been seen as a political rather than design issue and associated with the

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\(^{13}\) Bonsiepe G (1999) INTERFACE: An approach to design Publisher: Jan van Eyck Akademie, Maastricht, the Netherlands. ISBN: 90 6617 212 6.

\(^{14}\) Since the interview Professor Bonsiepe has moved to Brazil permanently where he is teaching at the ESDI in Rio de Janeiro.


Dr J Langrish has recently retired from the Art & Design Post Graduate Centre at Manchester Metropolitan University & Dr Alpay Er is an Associate Professor in the department of Industrial Product Design at the Istanbul Technical University
political left”\textsuperscript{16}.

Could you expand a little on this?

Recognition is a relative issue. It is not one of my major concerns. We might ask: recognition where and by whom? I am not particularly inclined to self–branding and self–promotion in the professional field of design. I cannot complain about an absence of recognition – the opposite of what might be called the narrow-minded chauvinism of the ‘centre’ that dwells in supposed superiority or ‘development.’

There are universes of language, and if we limit ourselves to the universe of discourse of the English language, we are by definition cut off from a lot of what is going on in the world. In Latin America where I am teaching, living and writing for a great part of my time, I cannot complain about an absence of recognition.

Q11. What would you say your own contribution has been to the field? What lessons have been learned & what would you do differently?

These are various questions, so I will take them step–by–step.

I consider my function in Latin America more as a catalyst, simply being there at the right place at the right time with the right kind of people, just by chance, mixed with an ingredient of personal decision because of my general interest in the Latin American culture – the great variety of different cultures, which I find very stimulating. I feel at home or at ease when I am in Latin America, be it Brazil, Mexico, Cuba, Argentina or Chile. I don’t feel like a foreigner there. On the contrary, I find a receptive climate for what I am teaching and writing and doing as a professional. The hospitality and solidarity of Latin Americans is proverbial.

Now, assessing what I have done so far – and I tell you that I don’t intend to end my work very soon! I would say that I helped, in a critical moment of industrialisation, to define the profile of the industrial designer in Latin America, perhaps even with extrapolation to India and other peripheral countries at that time. Apart from this professional role, I educated or put some students on a track where on the one hand they acquired the capacity of a critical discourse and at the same time became efficient professionals. During our meetings at this conference arose frequently the conflictive issue between practitioners versus theoreticians. I find this a very damaging tradition. I do not accept this bi-polarity that labels you either

as theoretician or as practitioner. This either/or opposition has its roots in the origin of our profession, namely vocational training with its deeply ingrained anti-intellectual attitude. However, in university courses you are obliged to think what you're doing and to reflect on your activity and not just on your own activity but what is going on around you. This is typical of the ulm approach, of which I would consider myself an exponent - an exponent of critical operationality.

So in summing up, my approach was to orient young people that did not find answers to their questions in their own context; to provide them design tools and to propagate industrial design as an autonomous activity separated from art and architecture and engineering. Not only in Argentina or Chile and Brazil, but also in other countries like Cuba where I spent 2 months in 1984 again under the contract of a United Nations consultancy job, in order to help to get into shape their ambitious project of the National Office for Industrial Design.

Q12. In the field of Design for Development what would you consider the criteria should be for judging a successful design?

I wouldn't say the criteria have changed, though we cannot talk today anymore about development policies. These have been abandoned. In peripheral countries today the former development policies have been replaced and dislocated by policies of financing the external debt. Finance-driven policies don't take into account local industrialisation, local needs, local populations. The present imperative is: Export or die. Whole countries live only to serve their debts – debts that grow and grow and grow provoking social misery and a potential for conflicts. Banks 'Über alles' – that is the present dogma. In Latin America, we can observe a return to a situation similar to the agrarian feudal economy in the Middle Ages where the majority of the population lived only to make tributes to the rulers. Today whole nations mortgage their future due to the enormous amount of money they have to payback on international loans – loans of questionable value and outside any democratic control because the local populations that are supposed to 'benefit' from these loans are not asked at all. It just happens to them like a thunderstorm from above. As I said yesterday in my short presentation, the capital flow from the South to the North is bigger than vice versa. So contrary to popular opinion the North is not 'helping' the South at all, but the South is transferring value to the North.
Returning to the question of the criteria, I interpret the role of design professionals as being responsible for the quality of use of artefacts and information. Designers are specialists in the concern for the quality of use of artefacts – material or immaterial. Let me add that the domain of 'quality of use' includes the formal-aesthetic dimension that is intrinsic to design and design work and not simply an add-on that you can dismiss. It includes also environmental criteria. Designers intervene in helping to assimilate the artefacts into our everyday practice. That is for me the main issue about industrial design and graphic design. So one criteria of success could be paraphrased in the words of Brecht: to make the world more habitable – not a bad aim for a profession! Formulated in more general terms I claim that the most important criteria for successful design is any attempt to contribute towards autonomy be it the autonomy of the user, be it the autonomy of the client, be it the autonomy of the economy.

Q14. Design for Need and Design for Development are both terms that have been attached to this area in the past. What terms would be most appropriate today to describe design activity in this area.

The Design for Need and the Appropriate Technology movement cannot be removed from their historical context – their time has passed. Today the general settings, particularly the macro-economic settings have changed drastically into a situation characterised by the anything-but-clear notion of 'globalisation'. When I was working as a consultant for different governments and private institutions or companies, the focus was on the material production, artefacts, machinery, tools, toys, and furniture. Whatever the products, the industrialisation process was linked to a hardware basis. Nowadays I would say, the hot design questions have shifted from a material culture to information culture based on information technology.

If today I was called to assist in some programme I would focus on the importance of information technology and communication, which have not been considered as decisive factors in industrialisation policies so far. I don't know of any government plan in peripheral countries that takes into account and tries to do something about this sector of communication and information technology from a design perspective that puts people in the centre. And I would say, there design has really a vast new field for activity.
Q15. What message do you have for designers and design educators working in the development context today?

I have always resisted the label of Design-Guru and of having up my sleeve the magic solutions. I don't have the magic solutions. What I do is to go to a particular context and then see what I can do there.

I would divide your question into three parts: Professional action, Education, and Research.

We all know that design is a scandalously under-researched phenomenon, compared with other domains of human life and academic life. As I wrote elsewhere\(^{17}\) a profession, which does not foster and promote research and incorporate research intensively, building up a proper knowledge base, has no future. We are confronted today with the challenge of constructing a proper body of knowledge about design issues with the help, of course, from many other disciplines such as sociology, computer sciences, philosophy & history, amongst others.

Particularly in peripheral countries, design research is necessary and has a legitimate function because through this research the design discourse is promoted, people start to reflect on it. I am however aware of a danger, related to what we would call esoteric research issues. If we look at some research work, which is very well done of course, obeying all of the rituals of scientific procedures, I sometimes ask myself what is the relevance of the issues that are dealt with? So my recommendation would be, stick to the local context, this is the rich stuff which cannot be substituted, which is proper. Starting from this local ground without, of course, losing the international perspective. I am definitely not advocating a parochial view of design.

Now to education. This is a very thorny question, not only in peripheral countries but also in central countries. In all countries of the periphery we can observe that design is far more rooted in the academic sector than in professional practice. It is an alarming fact that we register a demographic explosion of design courses sometimes of questionable quality for

Appendix 8

example, evening courses, which last three semesters, and then you become a designer. If you tried to do this in Medicine or Engineering, they would laugh at you! Design has the image – the unjustified image - of being an easy career. It tends to attract the wrong people.

We also face the problem of the 'banalisation' and trivialisation of design during the 90's. Under the label 'design for fun', designer jeans, designer food, designer drugs, designer hotels, designer…? I'm not against fun, but I think it's misleading to put exclusive focus on this aspect of design and designers intervention. I am definitely against the notion of design as an ancillary function of marketing.

**With regard to design education I would recommend (though I know this recommendation is very difficult to fulfil) that the people in charge of the courses be persons that have professional experience. Otherwise we get into an academic closed and sterile circuit in which no innovation will occur - the so-called 'title factories'. Both design and design education lives from contact with real world problems, in searching for and accepting problems from the outside and transmitting them into the learning environment. Design education anywhere has to reassess its foundations that are often taken for granted and academized and bureaucratised. Breaking with traditional paradigms, addressing the unresolved relationship between design and sciences, getting relevant design research done, these are issues that are relevant to design in general.**

Now to the professional issues: I do not feel authorised or legitimised to tell colleagues what they should and should not do. You probably know the very recommendable book 'Advice to a Young Scientist' by the British molecular biologist Peter Medawar. I think every designer should read this, it's a very clarifying book. He does not talk about design, fortunately enough, but in a typically British ironic manner gives a good x–ray of what a scientist is and should and should not do. Scientists make research, write papers, they produce knowledge and these papers are then presented in conferences and later on published in learned journals or books. He quotes from a manual of the British Society of Electrical Engineering, a manual on how to deliver a conference paper and how to prepare a text for a lecture. He states that all persons who are giving a public lecture are under certain stress. The manual recommends that if you want to feel secure then you should stand in front of your audience with 40 cm distance between your feet. Note the fantastic precision, it must be 40cm and not 38! This, of course, illustrates one of the ridiculous
aspects of advice on what to do and not to do.

I would recommend the professional designers working in industry or working as professionals in their own design studio's or in public institutions, that they never forget what I would consider the basic claim of our profession: 'design for autonomy.'

I would like to end with a quote from an Argentinean writer who lived for a long time. He lived in three centuries. He reached the age of 103 years. He wrote books but more and more he desisted from publishing these books. He wrote them for his friends. He opted not to live in Buenos Aires but in a very small faraway provincial town. When he was asked why he preferred to live so far away from the fascinating metropolis of Buenos Aires he answered with a very hard phrase (and I ask you not to misunderstand me if I paraphrase this assessment, transferring it to design):

'The Centre knows nothing about the Periphery, and the Periphery does not know anything about itself'. This provocative sentence might serve as a breeding ground for reflections about the dialectic relationship between different discourses and practices of design. After all, we live in different places, but in one world!
A critique of design methodologies appropriate to private sector activity in development.

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Abstract

Design has received increasing attention over the last half-century and is now firmly embedded within almost all aspects of corporate activity. This article explores the role of Design within Development.

Design is widely used and understood, within capitalist economies, to denote a diverse set of tools, used to maximise market share, sales and profits and support market differentiation and brand identity of products.

The progress of two convergent design-related threads is briefly charted; the growth, since 1950, of a view that design has a real contribution to make to social responsibility and sustainability; and the recent increasing evidence of the employment of design-like skills in development contexts.

The article reviews a number of alternative models that are being developed and concludes with a number of short case studies, which illustrate these models and highlight the
potential of their largely process-based methodologies for private sector activity in a development context.

**Introduction**

“Design aims to seduce. The sign of a great design is not that it performs the task for which it is intended particularly well, but that it demands to be possessed” (Hirst, 2002); thus the opening article in a recent edition of The Independent Magazine. There is overwhelming evidence, in every Western, Northern, industrialised, capitalist country, that design is seen and valued by industry and government for its ability to weave a sales-boosting, profit-generating spell over all aspects of business. This is not to deny the contribution that design, wisely used of course, can bring to efficient and effective business and consumers, in a wide range of contexts.

There has been, over the last fifty years a small, but growing, interest in the role that Design might play in the alleviation of poverty in the peripheral regions and countries on this planet. The history has been one of small numbers of designers and educators, usually working alone and sometimes with the spasmodic support of design bodies or international organisations, making un-coordinated, disconnected excursions into this territory.

The moment seems to have arrived for a more coordinated move into this arena. Although not the purpose of this article it could be suggested that such a move could also benefit wealthier nations as they are forced to confront the impact that diminishing resources, destabilised climates, and demands for greater equity in access to resources, will have on their own lifestyles and quality of life.

**Perceptions of Design from a Western Perspective**

That class of activity, which predominantly in industrialised countries, is generally understood as ‘Design’, has existed since humankind began to shape tools. It is also the case that the same class of activity has existed for similar, or arguably, even longer periods, in countries that are now designated as ‘developing’. The distinction between the two contexts is precisely identified by Rajeshwari Ghose, who states, from an Indian perspective, “…design is an ancient activity even though a modern profession” (Ghose, 1995).
Throughout its short, formal, history from an industrialised perspective, the practice and theory of Design has been linked to industrial production, and in turn to a capitalist framework. Whitley, commenting on Buckminster Fuller, an early design pioneer and thinker, states that he had high hopes for the activity of design but a low opinion of its links to industry. “Design, Fuller believed, could solve the world’s problems if it dealt with the real issues & concerns rather than the phoney desires dreamt up by capitalist manufactures and their lackeys….industrial designers” (Whiteley, 1993).

Some other designers and commentators, however, assert that serving capitalism is the prime activity of the profession. Whitley quotes a number of sources that suggest that Design is simply as a support function for commercial activity: “Here is design at work… Improving competitiveness. Winning Markets, Increasing profitability, That’s what design is about”, John Butcher; “There is only one reason for hiring a designer and that is to increase sales of a product”, J G Lipincot; “To put it simply, the design process is a planning exercise to maximise sales and profits”, Design for Profit, DTI; “Industrial designers are employed primarily for one simple reason: to increase the profits of the client’s company”, H Dreyfuss (Whiteley, 1993).

Other design professionals would lend support to Buckminster Fuller, albeit from a noticeably pessimistic point of view, with no clear suggestions as to possible solutions: “There are professions more harmful than industrial design but only a few of them. And possibly only one profession is phonier… marketing… designers have become a dangerous breed.” (Papanek, 1972). “If the will exists among designers, it will surely be possible to reinvent industrial design. If it doesn’t, designers will simply become part of the problem whose solutions other professionals will need to invent” (Margolin, 1998). “Design seems to be in a state of stagnation in terms of both ideology and activities. One gets the impression that design has drawn apart to simply keep watch while the world grapples with numerous problems” (Ekuan, 1997).

The authors conclude that design activity has wilfully contributed, on a massive scale, to the excesses of consumer society in the so-called developed world. In a world where a minority of the population owns the majority of the world’s wealth, much of the original idealism and altruism of the early design movement exemplified by Fuller & Papanek has been lost and design has acquiesced in the capitalist merry-go-round. Western/Northern concepts of design have forsaken the contribution to the quality of life capability of the
discipline in favour of the added value/increased sales/profits role. Design, in the ‘developed’ world bears much of the responsibility for peddling visions of unsustainable, even unattainable life-style – if not immediately unsustainable for the Western/Northern minority, then certainly unattainable for those within the Eastern/Southern majority who live in poverty.

For all that, the discipline of design has enormous potential to positively affect the quality of life even in a low-income context. Design does not have to be linked to high levels of consumption of material goods. There are signs of a small, but growing body within the discipline, which is seeking a more socially responsible role for design.

A manifesto issued by a group of designers, as long ago as 1964 (3), and re-issued and updated in 2000, declares, “There are pursuits more worthy of our problem solving skills. Unprecedented environmental, social and cultural crises demand our attention”(Adbusters, 2000).

A review of the 2001 Superhumanism Conference in London found that “designers are increasingly conscious about their social role”(Macdonald, 2001).

Victor Margolin in a paper on sustainable design suggested that “Design must disengage itself from consumer culture as the primary shaper of its identity and find a terrain where it can begin to rethink its role in the world” (Margolin, 1998).

It is timely, then, to consider design as a truly professional, humanitarian, social and ethical activity, engaged in theory, research, education and practice. It is widely acknowledged that designers have transferable skills and that much of the value of a designer’s contribution resides in the process skills that he or she brings to the project or problem, as distinct from the contribution to the quality and properties of the resulting product.

**Design in a Development Context**

There are examples of formal design education in the mid 19th century in parts of the former British Empire. In India as early as 1851 there are examples of art & industries schools (Ghose, 1995). However the concept of design being a factor in development came much later. Some would say that the ‘development era’ began with the inaugural address of president HS Truman in January 1949 (Esteva, 1992). Others, such as Thomas, would argue that this was merely the birth of ‘development as practice’ or ‘intentional development’ and that development as a concept has a much longer history (Thomas, 2000b). Whichever position one takes, the published evidence points towards the
conscious inclusion of design as a factor in the development field beginning in the years immediately following the Second World War.

Post-war reconstruction, especially in Europe, was needed in order to provide the markets necessary for the reorientation of American manufacturing industry back to peacetime production (Esteva, 1992). According to Ellwood, the release of funds and consequent rate of progress was too slow to satisfy the American government, so in order to speed things up the Marshal Plan was implemented in 1948.

As part of the wider remit of the plan there were a number of primarily American-led design-based initiatives in Europe and Asia, focussing on trade links. Over the next decade, as the European countries began to recover, attention switched to other continents. Ellwood notes “… the IBRD (International Bank for Reconstruction and Development) turned its interest to the newly independent countries of the Third World where it became widely known as the World Bank” (Elwood, 2001).

President Truman’s inaugural address seems to have encapsulated this new focus;

“We must embark on a bold new programme for making the benefits of our scientific advances and industrial processes available for the improvement and growth of underdeveloped areas.” He goes on to say that “Greater production is key to prosperity and peace. And the key to great production is a wider and more vigorous application of modern scientific and technical knowledge”(Truman, 1949).

According to Er & Langrish, “The first international approach to industrial design in developing countries was a US government initiative.” (1) In 1955 the U.S. congress approved a plan to survey craft-based activities in developing countries. The initiative was administered by the International Cooperation Administration (ICA), and as industrial design was part of the remit of the aid programme, the ICA approached a number of American design firms to be involved in the programme.

The purpose of the programme was to survey crafts-based activities in specific countries with the aim of recommending initiatives that could improve the quality and competitiveness of such products on the open market, especially in the United States. As such this activity could be seen as being peripheral to the practice of industrial design as
understood in industrialised countries. However it demonstrates an interest in the activity of artisans and their importance to the economy both on a national and an international scale.

It is also clear that this initiative was part of a wider picture of development activities initiated by the United States of America at this time and ran concurrently with the Marshal Plan, which provided aid for the reconstruction of Europe (Er and Langrish, 1992).

Esteva asserted that development activity served the “…hegemonic design of the United States” (Esteva, 1992), stating that “When Truman pronounced on development, it was an expression of the World power of the United States.”

This is contextualised by Thomas as follows “…development has to be analysed in relation to capitalism…and the history of development should be viewed over the whole period of the domination of the industrial capitalist system.” (Thomas, 2000a)

During the 60’s & 70’s organisations such as the United Nations (UN) became interested in design as a tool in the development process. In 1970 the United Nations Industrial Development Organisation (UNIDO) hosted a conference entitled “The development of engineering design capabilities in Developing Countries.” One of their main recommendations was a series of design centres based in Developing Countries to promote the practice of product design, and in 1973 commissioned a report from Gui Bonsiepe entitled “Development through Design.”

In 1976 The Royal College of Art (RCA) arranged a symposium on the social contribution of design entitled ‘Design for Need.’ According to Professor Frank Height of the RCA, the symposium was arranged as the result of a synthesis of disquiet from many professional and student engineers and designers about the lack of opportunities to use their talents in ways that were socially useful.

A number of papers were presented that represented a broad spectrum of thought on the subject. Professor Sudhakar Nadkarni presented an Indian perspective, emphasising the need to concentrate resources on developing the village economy he proposed that designers who want to be of benefit to these rural economies should become part of the community. The primary role of this activity would be to create jobs, as a means of achieving this he proposes that the designer should train local people.
"The education-cum-training base should be as self reliant as possible by training local people who will subsequently train others"

In the same conference Gui Bonsiepe presented a paper entitled ‘Precariousness and Ambiguity’; in the conclusion to the paper he made the Statement:

“My Summary based on eight years of continuous work in peripheral countries: ‘Design for dependent countries’ should read ‘Design in dependent countries’ or ‘Design by dependent countries’. The centre does not possess the universal magic formulae of industrial design which have to be propagated to the inhabitants of the periphery whom the intelligence agencies’ ideologically conceives as…[the]… underdeveloped…” (Bicknell and McQiston, 1976).

In January 1979 UNIDO & The International Council of Societies of Industrial Design (ICSID) organised a joint meeting entitled 'Design for Development.' This was the first international meeting to discuss the role of industrial design in Less Developed Countries and also the first time that industrial design was suggested as being worth including in national development plans. The result of this meeting was the Ahmedabad Declaration on Industrial Design for Development. The Declaration document makes a large number of recommendations. It is however, the declaration itself, which makes the most interesting reading.

There are four key phrases, which make recommendations. These are summarised below:

“The meeting for the Promotion of Industrial Design in Developing Countries convened by the United Nations Industrial Development Organisation… Solemnly declares… [That]…design can be a powerful force in the developing world…

…designers must have a clear understanding of the values of their own societies…

That design in the developing world must be committed to a search for local answers to local needs, utilising indigenous skills, materials and traditions…

That designers from every part of the world must work to evolve a new value system which dissolves the disastrous divisions between the worlds of waste and want, preserves the identity of people's and the priority areas of need for the vast majority of mankind”.

The document then goes on to set out a ten-point plan of action. In view of the wording of the declaration, the plan has a strong bias towards institutions. However over twenty years later there seems to be little evidence of action by these two bodies on these declarations. (ICSID, 1979)
At the ‘Design Policy’ conference in 1982 Mohammed Idris commented on the impact of design in this context, delivering a damning critique of designers as elitist and under the control of the free market at the expense of designing for the poor & marginalized. He goes on to say; “The irony of the situation in the Third World is that despite not designing for the poor; designers do have an impact on the poor in the sense of making Third World people lose self-confidence in their autonomous and indigenous designs, cultures and lifestyle” (Idris, 1982).

In another paper at this conference Williams supports this view in exploring the wide-ranging and damaging impact of Western advertising on the values and aspirations and choices of people in the developing world (Williams, 1982).

The negative impact of such interventions from the perspective of the ‘recipients’ in developing countries is summed up by the poet Rabindra Nath Tagore:

“We have for over a century been dragged by the preposterous West behind its chariot, choked by dust, deafened by noise, humbled by our own helplessness, and overwhelmed by the speed. If we ever ventured to ask 'progress towards what, and progress for whom?', it was considered oriental to entertain such doubts about the absoluteness of progress” (Tagore, 1941).

**Questioning the ‘Western’ model**

At the same time as this growing interest in the potential of design as a development tool in the West, there was a small but growing critical questioning in developing countries, of the dominant model of professional design practice and its underlying design education system developed in Europe & North America, as being inappropriate in their context.

Professor Sudhakar Nadkarni in 1976 challenged the Western notion that design is for maximising profits proposing instead that the primary role of design in India should be to create jobs. As a means of achieving this he proposes that the designer should train local people: "The education-cum-training base should be as self reliant as possible by training local people who will subsequently train others" (Bicknell and McQiston, 1976).

In her paper on design training in development situations Jacqueline Corlett highlights the differences between the requirements of developing countries and those of post-industrial
nations. She points out that it is neither feasible nor desirable to transplant educational programmes, but instead proposes a more informal approach based on work based training and participation. “Designers have a unique set of skills through which many sections of society can have their needs met; an ability to blend imagination and facts, applying them in a relevant way to real issues” (Corlett, 1997).

In 1998 Singanpalli Balaram, a senior faculty member at the National Institute of Design in Ahmedabad, published a book entitled ‘Thinking Design,’ comprising of a number of papers, which relate a particularly Indian view of the role of design in a development context. He suggests the concept of “training of the trainers” as opposed to the traditional system adopted in developing countries “Selected young individuals are trained in foreign universities; foreign consultants are called in, to give training… and institutions are set up as ‘replicas’ of foreign institutions…” He goes on to say: “Such training is not guided by the socio-cultural, economic and political conditions prevailing in the country. Such a system of training once set-up is difficult to change because trainees from such a system produce trainees of the same order for tomorrow, forming a vicious circle.”

Ballaram suggests that design educators across the developing world are increasingly suggesting that Western design education methods and practice do not fit with “the roots and anthropological patterns of these cultures.” He suggests that “… there is another kind of design which is prevalent largely in the Third World…such design is developmental nature and is non-tangible or invisible to people who are used to looking for an end product”. He proposes an alternative design process: “Instead of ‘parroting’ borrowed design processes and education…it must be an appropriate process which fits the people, their cultural minds, their economic conditions, their own skills and their available resources.” He sums up this alternative approach as follows: “What is now required …is not a skilled designer…but a broad based, socially well integrated, humane designer with a broad global vision” (Balaram, 1998).

Margolin in an article in Design Issues cites the example of Curitiba, Brazil, illustrating the broad application of design methods in a political context. “…the former Mayor… an architect, established an Institute for Research in Urban Planning to identify problems within the City that could be addressed by designers whatever their field of expertise…[this] enabled Curitiba’s design staff to invent projects in response to
discovered needs” The projects addressed ranged from bus routes to carts for informal collection for recycling (Margolin, 1998).

**Alternative models for design in Developing Countries**

In discussing possible alternative models for design it is worth highlighting a recent encapsulation of current ‘global’ thinking to which these models would be ‘alternative’.

The UK Government Department for International Development (DFID), report ‘Eliminating World Poverty: Making Globalisation Work for the Poor’, December 2000, provides this overview of an agenda for development within a global economic context. In the Foreword the UK Prime Minister, Tony Blair, rests the case for drawing “the poorest countries” into the global economy on “increasing access to modern knowledge and technology, … and “new trade and investment opportunities for all”, coupled with the risk that “if this is not done, the poorest countries will become marginalized, and suffering and division will grow, and we will all be affected by the consequences.” This is a mixture of a general perception of economic benefits that automatically follow from joining the global economy, and equally general anxieties about the consequences “for all” if that does not happen - the carrot of trade and investment opportunities for all and the stick of suffering and division (DFID, 2000).

The alternatives proposed by the authors in this article, albeit in the form of design-led developments, are driven by consideration of a different, broader range of criteria for success.

An increasingly recurrent starting point for new models for design, manufacture, marketing or management relates to the needs and circumstances of SMEs and the markets they serve, whether in a development context or in an industrialised country context. These initiatives are commonly supported through partnerships between industry and education/training in the form of new courses involving workplace study and research consultancy involving knowledge transfer.

The authors question whether at this scale of operation the term ‘corporation’ is appropriate, and suggest the use of the term ‘enterprise’ as a more useful alternative, with current connotations of smaller scale, learning organisations typified by a new mix of commercial research-led activity, in partnership, often, with universities, research
organisations, governments, charities, and foundations. It is noted that this type of organisation is also capable of working less formally when necessary, and typically develops new strategies, skills and working practices in direct response to the ‘needs and circumstances of … (their) … markets’ as well as culturally, economically and technically embracing the contemporary imperatives of sustainability and ethical operation more easily than traditional industrial corporations are able to.

In that sense it is proposed that it is more fruitful to look for examples of pro-development design strategies and practices among the numbers of these enterprises than among the ranks of multi-national corporations. [One example, which is a possible exception to this, is the Freeplay Energy Group, which features a case study later in this article.]

In the field of design there are a small number of programmes arising from such enterprises, some of which have attempted to operate almost entirely within the informal sector. The principles and practices being developed and applied in this sector stand in marked contrast to those of the major corporations, working in the notably design-led sportswear sector, cited in the recently published (Oxfam and ICFTU, 2004).

Examples of these programmes each of which is aimed at artisans and crafts-workers, who are actively involved in producing items for sale are:

- 'Design for Profit'
- 'Discovering Design'
- The Diploma course of the National Design Centre Sri Lanka
- The activities of the charity ‘Motivation’.

**Design for Profit**

Buckley describes this training course as: “…aimed at Jua Kali artisans and introduces the concept of product design and development as a profit generating activity within small and micro enterprises” (Buckley and Crawley, 1994). (Jua Kali is the Kiswahili word for ‘fierce sun’ It is also used to describe activities in the ‘Informal sector’). As VSO volunteers Kieron Crawley and Aelsa Buckley, both designers, worked together to explore ways in which design could aid the artisans they were working with. The result of this collaboration was a half-a-day-per-week course, held over five weeks, introducing design
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to local artisans. The key concepts that were communicated in the course were: that design can be used to attract customers and to build customer confidence in products; and also to build the confidence of the artisans. In general the course produced good results, it attracted support from a number of sources and in particular from the local DFID desk officer. The course was run approximately 24 times in Kenya, Tanzania and Somalia (Fathers, 2002).

**Discovering Design**
This project is specifically aimed at the textile industry in Bangladesh. Corlett, who has lived and worked in this particular situation. Corlett proposes that designers have a critical set of skills, which could be of decisive importance to a nation's development. 'By part of their training and something of a natural inclination, designers are able to perceive and act upon potential problems and opportunities.’ She notes that these skills point to another important reason to introduce design education in Developing Countries: 'There are skills that designers possess in analysis and synthesis, which could be used for other purposes than the creation of objects. This 'discovery' appears to be encouraging designers to view their skills in a much more general context than has hitherto been offered. Surely this is the central key to understanding why design education is vitally important in development situations'

She designed a programme of training, which fits the specific skill needs and the socio-political environment in which the course was run. She describes the course in a conference paper as “…focussed initially on encouraging general skills of design process and methodology, applying these to meet a variety of both present and future needs and demands. Basic marketing skills are presented in a similar framework, as the designer in small craft business is primarily a bridge between the maker and the markets.” The programme was put together with a local consortium of textile manufacturers who released their workers 3 mornings per week for 2 months. In 1997 the programme was still in its infancy but ably demonstrated the need for such programmes in developing countries and the potential for design collaboration initiatives with small enterprises (Corlett, 1997).

**The Diploma course of the National Design Centre Sri Lanka**
This initiative is a little different to the other three, as it was conceived and run by The National Design Centre, an institution set up by the Sri Lankan Government. The course is full time and modular and, if all elements are taken, the total duration can be three years.
The resultant qualification is an Advanced Diploma in Multidisciplinary Design. The National Design Centre is not an educational establishment and does not aspire to being so. The course was originally conceived to support and train artisans and consists of a 12 week introductory basic design section, a 52 week section where the artisan majors on a specific craft, a 20 week design project and a 42 week period of workplace training. (Fathers, 2002)

**The Motivation Charitable Trust**

Motivation’s investigation into appropriate methods for design education included a course for seating technicians at their workshop facility in Ragama, Sri Lanka (2). The taught element of the course, observed by Fathers in June 2001, was run every morning, over a two-week period and followed up with a practical exercise each afternoon. The course consisted of 12 elements beginning with an introduction to the benefits of design and culminating with a product evaluation stage. It adopted a Western design course model, but the methods of delivery differed greatly from those employed on Western courses. Each stage of the course was supported by examples and exercises, which related to the current projects being run by Motivation in their workshops. The exercises developed from the briefing stage through to an evaluated prototype of a simple wheel assembly. The relevance of the exercises and the intensive nature of the course, coupled with a low staff to student ratio, produced impressive results (Fathers, 2002).

Each of the above programs has concentrated on artisan level trainees; has attempted to relate design training to a local need but each has distinctly different characteristics.

**Opportunities presented by new technologies**

The DIFID report defines globalisation as: “… the growing interdependence and interconnectedness of modern world.” It highlights this as one of the more obvious positive aspects of globalisation. One equally obvious new technology, which would seem to the authors to have much to offer in the field of development, is Information & Communication Technology (ICT).

Although it is asserted that more than half the people in Africa have never used a phone, mobile phone technology now has the potential to facilitate communication for certain sections of the rural poor where traditional landline telecommunications are unfeasible.
Fathers’ experience with rural artisans in South India revealed an increase in the ownership of mobile phones, where previously artisans would have had to travel some miles to the nearest phone booth. In Bangladesh loans were made available for individuals in remote communities to buy a mobile phone and set up a small, local ‘telecentre’, which provides access to communications for the community and income to the individual. [DFID, 2000 #50]

Radio is accepted as one of the primary means of communication in developing countries, with an estimated 80% of the world population having some access to a radio. However the means of powering such devices has been a perennial problem. Victor Papanek in the late 1950’s at the instigation of the US military developed a single band radio powered by heat, either a candle or later possibly dung (Papanek, 1972).

The potential of this means of communication for information on health awareness prompted the inventor Trevor Baylis to take a new look at the problem. He developed the concept of a radio, powered by a clockwork mechanism. Two entrepreneurs in South Africa took up the idea and production began in 1995. Although the original aim, to address a need in developing countries, was pursued with orders from major development agencies such as the International Red Cross, early on the company began to develop along two quite separate lines. With significant sales already going to the developed world, the non profit Freeplay Foundation was set up in 1999, to specifically support the sustainable delivery of radio information to vulnerable populations.

One of its most recent projects in collaboration with its commercial parent organisation is the ‘the lifeline radio.’ Described as “the first radio to be produced solely for humanitarian use” the radio was developed specifically as a non-commercial solution to the need for radio in this context.

The example of Freeplay is a positive illustration of the potential of design and development in a Globalised context. The original concept behind the products has been maintained and developed, but arguably one of the key factors, which made this possible, was the development of a range of products to appeal to consumers in developed economies.
**Case studies**

The following two outline case studies serve as examples of ways in which new pro-development models of ‘design’ are evolving in and through development contexts.

**Wheelchair Technologists’ Training Course (WTTC)**

This course was developed and conducted by the ‘Motivation Charitable Trust’ (‘Motivation’) and based at the Tanzanian Training Centre for Orthopaedic Technologists (TATCOT). The first course was delivered between 1999 and 2002.

The training course was developed as a response to an overwhelming demand to run individual wheelchair design and manufacture projects throughout Africa, by devising a training course that will provide a supply of skilled technologists, with some design skills, to the whole of Africa. It aims to work with existing indigenous skills and knowledge and to develop new ones. It is Motivation’s first project to prioritise training as a key requirement for long-term, sustainability – not just for one specific location, but for the whole of Africa.

The overall aim of the WTTC was “to train people from all over Africa everything they need to know to establish and run a wheelchair workshop” Subsidiary aims were for local trainers to be able to teach students how to design and build wheelchairs suitable for their local environment and how to manage a successful production and distribution service.

As a result of the course the Tanzanian Government now recognises Wheelchair Technologist as a profession. As a result of this project; the course is the only WTTC and awards the first recognised Certificate in Wheelchair Technology in the world.

The WTTC students come from all over Africa – so there will be a wide variety of resulting designs, responding to a very wide range of situations and needs.

The project’s structure was devised by the core project team, working from first principles and the local context, in the complete absence of any precedent. Previous projects conducted by Motivation, elsewhere in the world, provided valuable experience and transferable, generic skills.

The course employs a systematic approach to the technology of wheelchair design, manufacture and use. It has moved beyond the ‘traditional’ basis of local training for
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carrying out their own repairs, and repairs and making for others, to acquiring a greater all-round knowledge of the technology and the process of basic design and production.

The project and course teams acknowledge that, through this project they have gained greater skills and knowledge in education and training in this context.

The indigenous course staff and graduates have developed skills and knowledge in the broad field of technology, which for the purposes of the course, is understood to include some design-related topics, e.g. problem solving, design evaluation, costing, design management.

Graduates have also developed skills and knowledge in designing and building wheelchairs suitable for their local environment; managing a successful production and distribution service; teaching students to develop ways of ensuring that wheelchairs are available to the poorest members of their community. In due course, these skills will be applied by the graduates in training their own client/users.

Outcomes: The initial outcomes were judged to have met the initial requirements: There is a tested, generic course design, with one cohort of graduates and another currently enrolled on the course gaining the range of skills and knowledge intended.

Evaluation: The WTTC has been evaluated by Motivation against the original project objectives through following-up the graduates in their own countries. Motivation’s initial evaluation indicates that this is possibly one of its more sustainable projects to date.

Motivation believes there is high potential for replication of the course elsewhere and there is already interest expressed by other accredited prosthetics and orthotics centres.

The Avakasha Workshop Programme:

The Avakasha workshops (Avakasha means listening to crafts) were initiated by Poonam Bir Kasturi of the Srishti School of Art Design & Technology, which is an independent higher education institution, started by the Ujwal Trust in 1998 located in Bangalore, Karnataka, South India.

The workshops which follow a capacity building agenda, were developed from extensive experience in design interaction with crafts artisans. The concept of the workshop as the
name suggests is a two-way flow of information between the facilitators who have had formal design training and the artisans who have a wealth of indigenous skills and knowledge often as a result of generations of experience with materials and processes.

The purpose of the workshops is to empower a range of artisans in basic design & development skills which in turn will enable them to produce products which will be more suitable for their chosen markets and will command a higher market value.

The approach used by these workshops differs from other programmes with similar aims in a number of ways:

*Time scales:* Traditionally interventions to empower craftsmen in this context have consisted of one off workshops taking place over a short period of one to two weeks. The Srishti programme consists of four separate 6-day workshops over a period of 18 months with the same group of artisans. As a result of the second workshop an additional series of half-day feedback sessions were also built into the programme on a monthly basis to facilitate ongoing experimentation and innovation in the time between the workshops.

The guiding principles behind the timescales of this programme are determined by the capacity building needs of the artisans rather than the budget. This approach while reaching smaller groups enables a more intensive and extended learning experience.

*Evaluation:* Little or no evaluation is built in to the projects, primarily as to be meaningful it would have to chart and changes in artisan practice over a period of time. Project funds often don’t cater for such elements.

In the *Avakasha* workshops the nature of the programme running over four sessions allows for evaluation between the workshops and over the whole programme. The inclusion of monthly half days also allows for increased mentoring activity and feedback to ensure any confusions are addressed.

*Content:* The content of traditional workshops is generally based on Western design training methods, which at best are delivered by local design educators who can communicate effectively with the participants. However there is little opportunity for the participant to influence the content of the workshop.

With the Srishti model, although in a similar manner to other workshops the content has been primarily based on Western design teaching methods, efforts have been made to
allow for artisan participation in determining the content of the workshops. A participatory
evaluation method was piloted by Fathers based on an existing visual mapping and story
telling technique which enabled the participants to map their own experience and
perceptions of the process they use in designing and developing artifacts. This in turn
facilitated group feedback on the development process and also served as a focus, which
was referred to throughout the workshop.

Alongside this activity Kasturi has developed innovative programmes for undergraduate
students, which equip them with the essential skills attitudes and experience to interact
with artisans in developing products for the benefit of the wider society embracing the
principles of capacity building. Recent projects have included a modular terracotta
composting bin developed in collaboration with a community of potters to meet a local
need and providing a long term income source for the artisans.

**Conclusions**
The authors conclude that the design profession is still struggling with its identity, over
three decades after western designers began to question the human and social role of
design; and that there is little evidence that Design, particularly within Corporate business
is making any progress in setting goals, standard and strategies, which derive from the
needs of society.

On the positive side Design-like activity is beginning to be recognised as having a valuable
contribution to offer in development situations and pro-development activities involving
design are on the increase especially within the informal sector, supported by some activity
in educational institutions.

Generic design skills and processes are being developed predominantly by small
organisations and individuals (‘enterprises’) and utilised to address distinctly different
situations and needs. Typically this activity is characterised by a wide range of strategies
skills and knowledge focussing on the design process rather than its end product. The
following are examples:
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Capacity building
Participation
Job creation
Training trainers
Sustainability
Work based training
Responding to local need and working with available resources
Recognising and working in partnership with indigenous skills and informal designers
Using political power

It is suggested that one area of global corporate activity which is likely to have a significant and potentially positive role in development is ICT. Communication is a key factor in accessing information and knowledge; networking; facilitating more rapid development of enterprises and along with the rise of the support infrastructure contributes to models of sustainable employment, in the developing just as much as in the developed world.

References


NOTES:

(1) Industrial Design: for the purposes of this paper, the definition of Industrial Design adopted is: the area of expertise concerned with the conceptual, formal and material properties of three-dimensional products for consumption, to be produced by industrial production processes. (Fathers 2002, Literature Review, PhD programme).

(2) Motivation is a ‘UK registered charity working primarily in developing countries to improve the quality of life of wheelchair users’ its vision is to ‘initiate self-sustainable projects that will improve the quality of life of as many wheelchair users worldwide as possible’ The original case study from which the summary in this paper was drawn was originally presented by Coward at the Design History Society Annual conference in 2002. Further information on Motivation can be found at: www.motivation.org.uk.

(3) The original First Things First Manifesto published privately by Garland in 1964 includes the visionary proposal that “the prior call on our skills will be for worthwhile purposes”

(4) The Freeplay Energy Group originally called the Baygen Power Company was launched in 1994 to develop wind up products, based on the principles invented by Trevor Baylis.
Appendix 9

A9 The findings grid

To access an electronic version of the findings grid please see:

http://designindevelopmentcontexts.wordpress.com/