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Contents

1 Introduction

1.1 Focus of Research

At first, design and development do not seem to be immediately related. One notion evokes images of luxury, even decadence, while the other one is associated with poverty and aid. Nevertheless, everything that is produced industrially – be it a paperclip or a space shuttle – is given a specific "form" by some kind of a designer or a group of designers. The form of objects is relevant for development on several levels: Who determines the form of an object or artefact (designer)? Why is the form chosen in a specific way (structures/agency)? And, what are the implications and consequences of the form for the people who use an object? The role of the designer and of the user, and the social, political and economical structures their actions are embedded in, are therefore of interest.

International Development, including development cooperation and aid as part of International Relations, is a relatively new phenomenon. It exists as a malleable paradigm since the middle of the last century. Intending to plan and steer global, local and regional development, it covers various fields from politics, economics and sociology to anthropology or ecology. The University of Oxford defines it as "complex economic, social and political processes of change in countries in the poorer parts of the world".[1] Strategies for development range from policy-making to theatre, and goals and indicators vary amongst the different stakeholders and agencies in the field of development cooperation. Furthermore, they are not static and change over time. Development Studies analyse different ideals of development and the methods which are applied in order to realise these ideas.

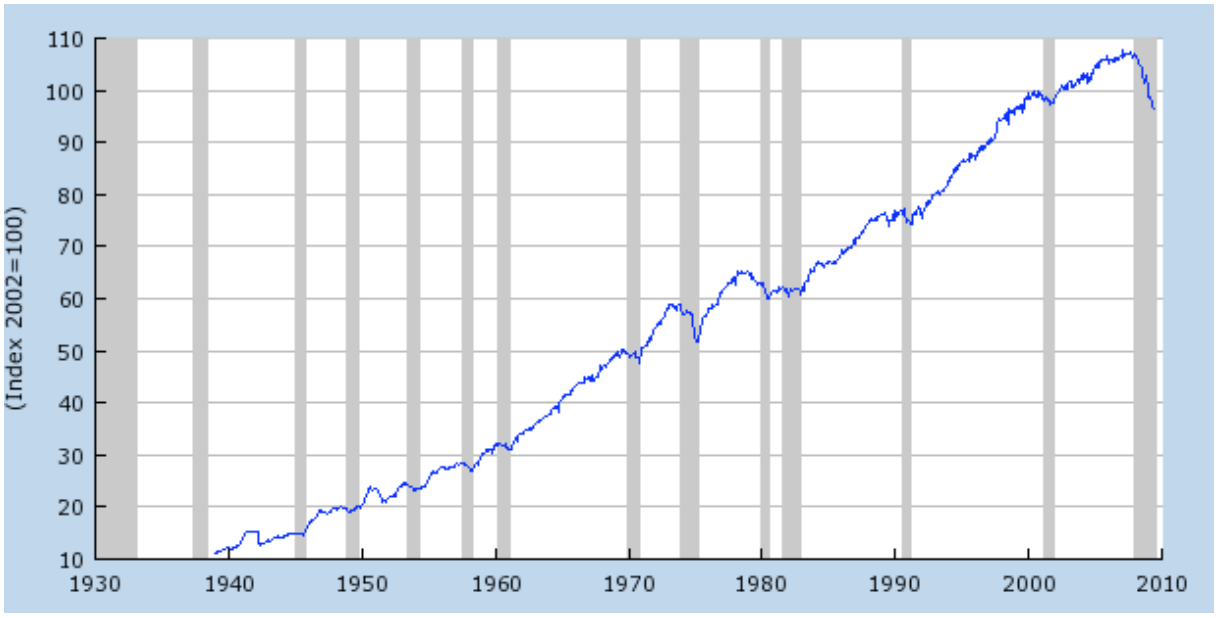
Design focuses on the shaping of human structures - from objects to human systems. The UK Design Council formulates its tasks correspondingly: "Designing a product is the process of deciding how it's going to be made, what it's going to be made of and, to a large extent, what is going to happen to it while it's being used and

[1] http://www.qeh.ox.ac.uk/

how long it lasts. (...) But the hand of design extends further, to the systems for getting it to the customer, supporting it and getting rid of it." (DCAR, 2008: 16) Industrial design is particularly relevant for development because it represents the material aspects of development that are central to many problems we face today. The Western lifestyle is founded upon mass consumption that on one hand results in a high standard of living, but on the other hand provokes serious environmental problems, as well as social and political conflicts. Design is largely promoted in glossy magazines for the Western upper and middle classes. It has gone through different phases to get there and is constantly reorientating in order to discover new fields and markets. Designers often work in transdisciplinary teams for example with engineers, anthropologists, ergonomists, to name but a few.

The graph below shows the amount of industrially produced consumer goods in the USA:

Figure 1: Industrial Production – Consumer Goods USA



Source: Board of Governors of the Federal Reserve System

The amount of industrial goods, of which nearly all need to go through a design process, has increased dramatically in the past seventy years. This dramatic increase provokes a number of questions:

- Why has there been such an increase in industrial goods? How has this happened and what effects did and does it have on human development?

- How does this development reach into our personal, local, regional and global existences? How do industrially produced goods affect our lives? What does their increase imply for our personal, cultural, social, economic, environmental and political development? To what degree is design part of this process?

- Furthermore, how determining is design? Is it expressive and/or is there a co-evolution of design and specific human systems? How can an approach from a political economy and a socio-cultural perspective contribute to our understanding of the relations between development and design, and of related problems?

Both concepts and related practices discussed here are diffusive in regard to their scientific fields. Their study depends on transdisciplinarity as does their definition. For a thesis the topic “Design and Development” is, therefore, perhaps somewhat experimental. The study necessitates a generalist approach to accommodate the transdisciplinary aspects of the area of research, whilst also requiring a certain minimum in depth and expertise of the author in order to present a coherent work of analytical value. The lack of research on this topic, as discussed in the following chapter “Scientific Relevance”, represents a vacuum of knowledge on this seemingly “common sense”-area (Love, 2009) of interaction and research.

1.2 Scientific Relevance

“Globalization and connectivity are new realities that have brought profound changes in lifestyles worldwide. This is reshaping the overall pattern of cultural production, consumption and trade in a world increasingly filled with images, sounds, texts and

symbols. There is a clear need to better grasp the complex interactions among the economic, cultural, technological and social aspects guiding the dynamics of the world economy and the way people live in the twenty-first century." (UNCTAD, 2008: iii)

The United Nations Commission for Trade and Development has only recently recognised the importance of the creative industries for development. Design is not only relevant for development because of its creative aspect, but also for more traditional reasons.

1.2.1 Cultural Influence

The objects we live with and depend on are all-pervading and dominate our everyday behaviour. Our living and work spaces are cluttered with industrially designed goods that we use to communicate, move and, essentially, live. To a large extent our environments are industrially designed. In his anthropological work "The Social Life of Things" (1986) Arjun Appadurai describes how the functions and aesthetics of the goods we use and the ways we use them, define our culture to a large degree. At the same time, culture affects the ways we use artefacts and goods, defining our behaviour. Accordingly, culture, defined in part through the processes of production, distribution and consumption, maintains a dialectic relationship with design.

1.2.2 Economic Influence

Increasingly, design is being recognised as an economic factor as articles with titles such as: "Canada Lags While Asian Economies Use Good Design to Boost Growth" (U.S. Asia-Pacific Bulletin: 2007) illustrate. Design is considered increasingly important for international competition, and many countries have a national design strategy.

South-South trade is increasing as well as world trade. This results in an increase in demand for natural resources for the manufacturing of goods, and an increase in

demand for new markets in order to sell these goods (UNCTAD, 2007). As the table below shows, about 20 percent of world imports are in consumption goods:

Figure 2: Breakdown of World Imports by Stage of Production, 2003

Types of Imports	Percentage %
Intermediate Goods	54.1
Consumption Goods	19.4
Capital Goods	16.6
Rest of Trade/ Unclassified	9.9
Total	100

Source: UN Comtrade & UNCTAD (2003)

Consumption goods have not all gone through a design process but the majority requires design, especially when industrially produced. So the trade of designed goods is an important part of global economic systems.

1.2.3 Environmental Influence

The UK Design Council estimates “that more than 80 per cent of all product-related environmental impacts are determined by product design” (DCAR, 2008: 16). Mass production and mass consumption are highly hazardous for the environment and design is involved in determining a product’s lifecycle from production, over its use (consumption), to its disposal.

1.2.4 The Design-Science Paradox

Significant gaps between design theory and the reality of design and its effects on development, lead to different considerations:

Victor Margolin emphasises the ”[l]ack of correlation between design theories and theories from other disciplines, especially those that relate directly to human behaviour such as anthropology” (Margolin, 2000). Terence Love elaborates and identifies the “[w]eakness in the inclusion of social, environmental and ethical factors alongside technical factors in design theories” (Love, 1998b) as a reason for this gap between theory and its implementation. Another design theorist, Victor Papanek (1972), finds part of the problem in the lack of initiative taken by designers themselves to design ‘responsibly’. These considerations illustrate the theoretical awareness of the relationship between design and development, but they do not present specific ideas which would permit to resolve the problems of their interaction.

Terence Love’s approach engages in the difficulty outlined above. Love describes the epistemological difficulties of design: “The development of sound foundations for a coherent body of design theories and a unified discipline of Design has so far eluded design researchers.” Due to the “complex interdependent relationship between the discipline of 'Design' and scientific disciplines, [the] foundations of the field of Design are swampy and paradoxical” (Love, 2002, 2009 & Jonas, 1999, 2000, cited in Love: 1998b).

Love (2009), therefore, starts by dismantling design criticisms such as the ones listed above: a lack of collaboration between the interdisciplinary fields, a weakness of inclusion of developmental issues and irresponsibility of designers. Love perceives these as “common sense” concepts and suggests that design research should address these concepts and that designers should eventually abandon them, when they prove to be inconsistent or plainly wrong.

Among other design theorists, Love draws upon Klein's conclusive approaches for addressing a paradox in design theory. In short, he aims:

- to identify the inadequacy of familiar and well established concepts in the field of design; and

- to forcibly revise well established concepts and theories of the field in order to resolve paradoxes and epistemological inadequacies (Love, 2009).

Although designers and design theorists such as Gert Selle or Victor Papanek have written about design's influence on development in their interdisciplinary works, there is no comprehensive analysis of design from a developmental perspective. There are, however, aspects of design that reach deep into development theory and practice. I will try to isolate and define nodes of interaction between design and development that prove the relevance and utility of design for development. This follows the suggestion of Love to search for deeper, underlying reasons for the gap between design theory and reality.

The general and exploring focus of this study is justified by the absence of a comprehensive design analysis from a developmental perspective. Because of the lack of data available on design or designed goods in the context of International Development, I begin by outlining the interdependent spheres of industrially produced goods that involve design: production and consumption. The main part of this study is a comparison of different national design strategies and their relevance for the development of two distinct countries. It is embedded in a more general consideration about the relation of design and development.

1.3 Structure

In the first chapter of this thesis I present the methodology, hypotheses and research questions which guided the research for this work.

In the second chapter I outline theories and concepts of design and its relevance for development in order to set the parameters for the analysis that follows. A review of existing literature on the topic and a summary of the state of the art in this field, conclude this second chapter.

A developmental analysis of two different design movements constitutes the main part of the thesis. The analysis of design theories and their practical implications will be the main instrument for answering questions relevant to the field of development studies. These include mechanisms of agency and underlying actor's interests, global-local relations and transdisciplinary nodes of interaction, as well as the extent

of the causal and/or constitutive role of development theories in the determination of the outcomes of design processes.

The first case study is, design in the German Democratic Republic. This case study is relevant for the research questions, because it represents a nearly entirely closed system of product culture. In the period of its existence, the German Democratic Republic followed a Marxist inspired strategy of development, which clearly expressed itself in its products and their design.

The second case is India's national design strategy. India, too, followed a unique development strategy, and had a prominent role in the Non-aligned Movement. India is also particularly relevant as it is planning and implementing design strategies related to the country's development since its independence.

In the fifth chapter I treat the two case studies East Germany and India in comparison. This will be done by embedding the conclusions drawn from each case in the previous chapters into the context of mainstream design as practised in most Western countries.

The concluding chapter of this thesis starts with a summary and some final conclusions. It closes with a few suggestions for further research in this field.

1.4 Method and Terminology

Methodologically, this venture poses a whole range of difficulties. These difficulties are mainly due to the diffusive nature of both fields of interest, but also due to the lack of available data on goods in regard to their specific design. A comparison of development and design theories will lay the grounds for an analysis of the case studies of design as a development strategy.

The nature of this thesis requires certain simplifications. Countries in Europe and North America will be summarised as the "West". The West is succinctly saturated with consumer goods and has an intense culture of mass consumption at the centre of its social structures. "Emerging markets" shall be the term for those countries and

regions that are following the foot steps of the West in terms of economic development, which results in increasing consumerism and industrial production processes. I will use “developing countries” to denominate the countries that are central to the development discourse for being in various disadvantageous relations in the world economy and consequentially suffer from high poverty rates.

Another simplified expression that is used is “product culture”. This refers to the conglomerate of the diverse range of goods that are designed and do not have much more in common than the fact that they were designed. I chose the term culture to describe the linkage of objects and their behaviour determining, ideological functions as described by Appadurai. In contrast to “material culture”, which encompasses all physical components of our environment, “product culture” is set into a political and economic context as a component of a global system of production and trade.

The imperative transdisciplinarity of both fields of study, development and design, is at the core of this analysis. The aim is to find a way to incorporate these two broad fields and to highlight the areas of overlapping concerns. Two different governmental development strategies are treated in comparison with each other and with Western “mainstream” design. By Western “mainstream” design I mean design as it is practised in the West and how it is spreading through globalisation processes. The identification of problems caused and/or solved by design, as well as specific developmental issues involving design, are central to the analysis.

The results should open a new perspective on development: an analysis of development in the past 60 years centred around the material aspects of life, more specifically on industrially designed goods. Quotes, statistics, data and content analysis, understood as the study of records of human communication like books, websites and/or documents (Babbie, 1975), support my conclusions.

1.5 Hypotheses and Research Questions

Additionally to the questions posed in 1.1 The Focus of Research, the following more detailed ones guided the research:

- Which nodes of interaction appear repeatedly and seem pivotal to the relationship between the two fields?

- How do ideological paradigms influence design from a producer's and from a consumer's perspective? Is this a controllable phenomenon? Or, are there crucial variables that can influence change in a negative or a positive way?

- Is there a causal and/or constitutive role of development theories in the determination of design outcomes?

- What is the role of a designer? Are externalities for example a purely economic issue or is the designer equally responsible?

- Does the gap between theory and practice render all the above meaningless? If not, why? And, what does this implicate?

Assumptions:

Design affects development on multiple levels. Both ground on concepts of human needs, and are related in some way to consumerism, production processes and some kind of ideology. Design has an impact on environmental issues, as does development. Design is a cultural factor. It is an agent that influences culture and at the same time it is the outcome of human culture itself. In short, design is a crucial factor for any strategy of sustainable development.

On the other hand, design contributes to the reproduction of asymmetric global power structures by singling out the creative step in the division of labour and by imposing cultural values through enforced methods of production, the form of objects and their aesthetics. Thus, design in practice stands in stark contradiction to its theoretical foundation. Reasons can be found, partially in a) some of the concepts dismissed by Love as "common sense" and b) in the inability of both design and development to restrict themselves in their self-definitions.

2 Design & Development: Theory & Practice

2.1 The Origins of Development

After World War II, in the context of the beginning East-West conflict (1946/47) the foundations of the international community were shaped by the establishment of the Bretton-Woods Institutions: the World Bank (WB), the International Monetary Fund (IMF) and the United Nations (UN). The US European Recovery Plan, also known as the Marshall Plan, was the first big development aid package. The three main reasons which motivated the USA to give these loans were the extremely impoverished European population, the containment policy towards communism and the creation of a new market for excess produce. At the dawn of the Cold War, the Truman Doctrine gives evidence for this motivation: “the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures” (President Harry S. Truman's address before a joint session of Congress on March 12, 1947).

Development aid divides countries into donors and recipients. Donors and recipients have changed over the past decades. So have their aims, their motivations and the conditions. They represent the priorities set by different protagonists and reflect global power relations in political, economic and cultural respect.

Early definitions and aims of development were defined upon the ideological basis of the West that are in stark contrast to the socialist ethos of the Soviet Union. The theoretical model for legitimising interventionist measures was Western modernisation theory.

During the 1960s, decolonisation proved to be an effort to maintain control over different regions of the world in which the Soviet Union and the USA competed. As the Cold War unfolded, more countries became stages for the ideological battle between communism and capitalism. While both main protagonists in this conflict were aiming at spreading their concepts of civilisation, the early ideas of development were Western ones and were based on modernisation theory. The first

and foremost priority of early development strategies was to increase economic wealth through industrialisation. The Rostowian take-off model (Rostow, 1960) demonstrated how a traditional society could transform in five steps in order to achieve the same level of mass-consumption as the then called 1st World. These five steps are:

- **Traditional society** – at a technological level of pre-Newtonian standards; has a pagan belief system and no incentives for economic growth

- **Preconditions for take-off** – an entrepreneurial class that begins manufacturing forms; secular education is established; mobilisation of capital begins through the introduction of currency and banks

- **Take-off** – industries take shape and sector led growth becomes the norm

- **Drive to maturity** – diversification of the economy leads to less poverty and a raise in the standards of living

- **Age of High mass consumption** – consumers are not concerned with subsistence any longer and can direct society towards improving security, welfare, etc.

The ultimate goal for society in this growth-oriented model is mass consumption enabled by industrialisation. Industrialisation was supported by financial aid and direct investment by various donor countries and organisations. The 'trickle down effect' was said to occur, in theory, in order to spread the wealth among the population. In 1966 the United Nations Industrial Development Organisation (UNIDO) was founded and thus institutionalised this concept of development. At this stage the production process was given priority alongside with capital injection in order to finance this fundamental change. The productivity of an economy was seen as the indicator for the progress of a society, and still remains an unquestionable benchmark until today.

In the following section I will describe how design is embedded in this concept, how it contributes to this development goal, and outline critical assessments of its role in this process.

2.2 The Origins of Design

The Industrial Revolution occurred long before “development” in its present form existed, but indisputably had long-lasting effects on our planet. The consequences of industrialisation were profound socio-economic changes and cultural upheaval that laid the foundations for the societies we live in today (see: Kuznets, Parsons, Weber, in: O’Brien, 1998). Design as a distinct process in the production of goods, has its origins in the midst of this revolution as the determination of the form of the prototype became singled out as an individual task in the process of the division of labour.

Nevertheless, design can be considered to be as old as human civilisation. Tools and objects of daily use fulfil certain functions. They are created consciously and their material, shape, and colour are chosen by some kind of designer. In pre-industrial societies, producers were the ones who later used an object and artefacts were usually made individually. The producer had a high level of identification with the unicum he had created. Later, in feudal societies different guilds specialised in the production of certain types of products. Through cumulated experience and information and by passing this knowledge on from generation to generation, the quality of products could be raised on a communal level. Still, producers and users often were the same ones. And users could ask for specifications of an object, thus still demonstrating a high level of identification between the producer and the object.

With the emergence of mass production, the making of prototypes became indispensable. From now on, there was a clear distinction between producer and user. At the beginning, this role of the designer was usually assumed by artists or craftspeople. They were in command of the necessary spatial sense, imagination, and a feeling for the taste of the increasingly anonymous consumers. The division of

labour in the industrial production process results in low or no identification with the object on behalf of the producer (Heufler, 2004: 9).

Further development in industrialisation established the distinct job of the designer, which was responsible for an important part of the production process. The success or failure of a product could depend on its quality, colour, form, practicality or appeal to the consumer. The designer was also closely involved in the production process itself. He required knowledge of materials and methods in order to be innovative. There were several design movements that developed out of this situation, amongst which the very influential Werkbund in Germany, De Stijl in the Netherlands, Arts & Crafts in England, the Wiener Werkstätte in Austria. The following will go into more detail on the Werkbund and the design school that developed from it as it was very influential and its repercussions can be felt until today.

2.2.1 The Werkbund

The German Werkbund was a government-initiated project, founded in 1907. Its purpose was to merge traditional arts and crafts with methods of industrial mass-production. The relevance of this institution was in providing a sound basis for competition with England and the United States by positioning German products more effectively on the global market (Schwartz, 1996). There were parallel movements similar to this, such as De Stijl in the Netherlands. The Werkbund was a forerunner of the Bauhaus School of Design which existed from 1919 to 1933 (Schneider, 2005: 45).

2.2.2 Bauhaus and Ulmer Hochschule für Gestaltung

Founded by the architect Walter Gropius in 1919, the Bauhaus generated a prominent and influential design philosophy. The Bauhaus students abandoned historicism and its affluent ornamentation in favour of experiments with the functionality of objects and their form. The function of an object became the principle

focus of designing whereby functions have since been defined in a variety of different ways. The school was closed during World War II.

After World War II, in 1953 the Hochschule für Gestaltung Ulm (HfG Ulm) was founded in West Germany by Inge Aicher-Scholl, Otl Aicher, Max Bill, and others. Here, the basic ideas of Bauhaus were continued, refined, and developed further. Its members were radical in striving for rationality. They set the international standards for design education (Schneider, 2005: 111).

2.3 Functions

In the 1970s after the closure of the HfG Ulm the Offenbacher University took over most of its educational programme and summarised the functions inherent to every object and crucial for its successful design.

The so-called “Offenbacher Ansatz” by Jochen Gros (1983) was extended by Beat Schneider’s. The functions of an object according to this approach can be summarised as follows:

- Practical functions – these are functions concerning the physical experience of the object on a user-level, does it fulfil its purpose, is it easy to handle, etc.

- Aesthetic functions – functions concerning the sensual experience of the object through visual perception, but also on a motoric level, communicative, informative and functions that affect the psyche and sensory perception.

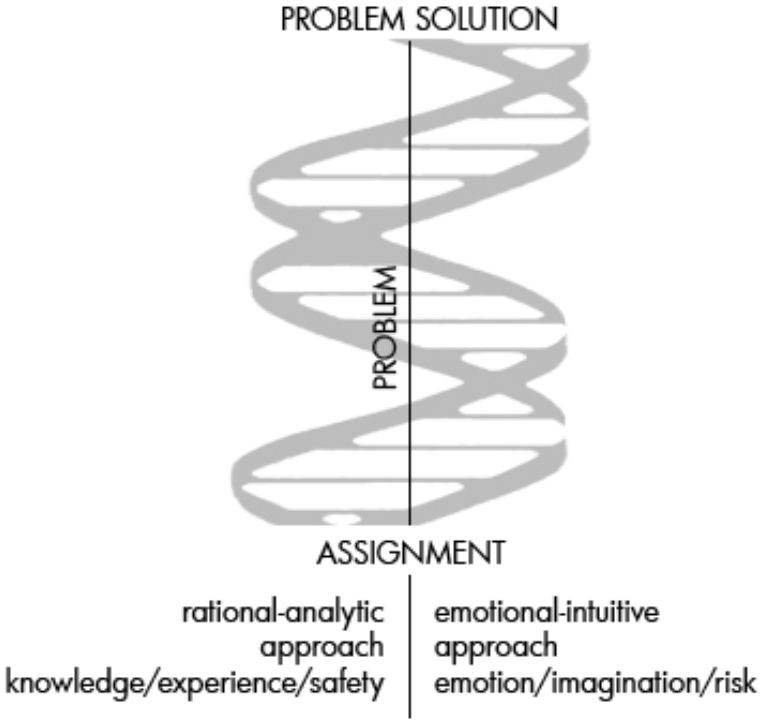
- Semantic/Symbolic functions – these concern the ownership level of the object and its social experience.

The rationality of this approach reveals the evolutionary ideals behind this discipline. According to the Bauhaus theory, there is actually something like an ideal form for an object so that it can fulfil its purpose with maximum efficiency.

2.4 Design as a Process

The value given to design education in the Bauhaus tradition still resonates until today, and much of it is dedicated to learning how to handle different materials and the basics of the processes of industrial production. Design is of interdisciplinary character and has developed special methods to incorporate the complex production processes of industrialisation. Design combines the different fields of knowledge from industrialisation with the rational approach of the Bauhaus-era and integrates the creativity often required for innovative ideas. The following are two models that demonstrate how designers deal with this complex process:

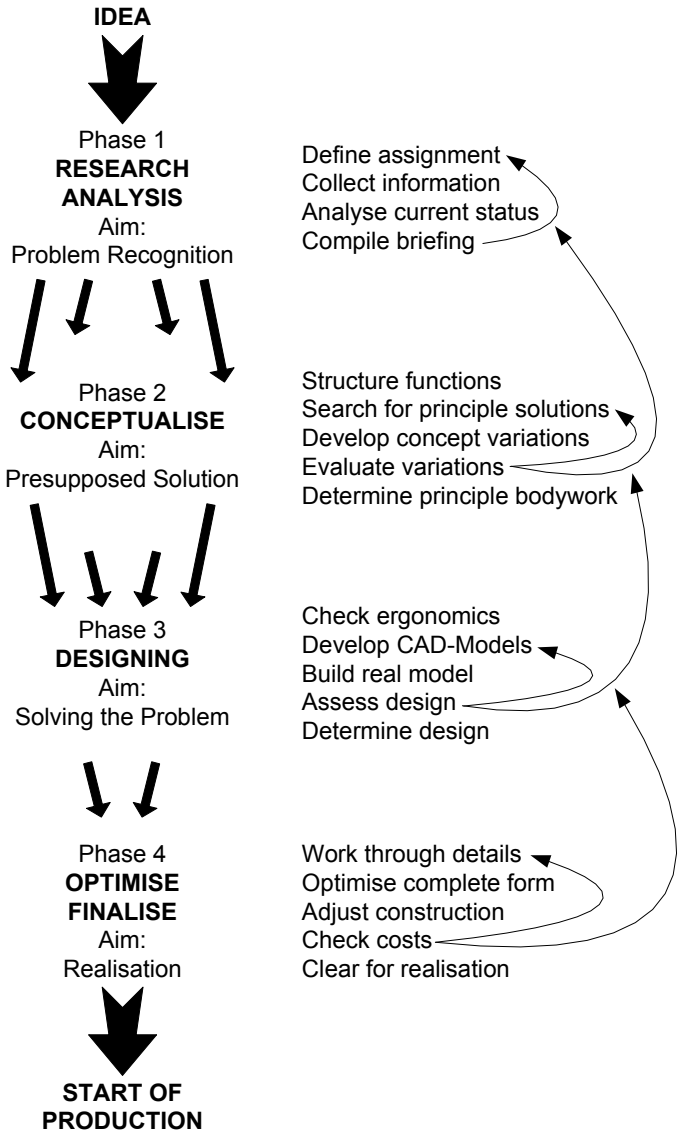
Figure 3: DNA-Model of combined rational-analytic approach and emotional intuitive approach



Source: Recreated and translated by the Isis Frisch, based on (Winter, 1984)

This model highlights the fusion of science and intuition and/or emotion in the design discipline.

Figure 4: The Designprocess – from the idea to the start of production



Source: Recreated and translated by the Isis Frisch, based on (Heufler, 2004: 78-79)

Design process always takes place in the context of product development so the process is of interdisciplinary team character. Visualisation in (Heufler, 2004: 78-79).

The two models illustrate the multiple layers of the design process and of the designer's job.

2.5 The Designer

The production of industrial goods lies in the hands of many. Complex high-tech products involve many professionals in their development: a marketing team, engineers, electricians and so forth. Why should a designer be included in this process? In his introductory work, “Design Basics”, Heufler (2004) claims that designers are by far not as adept in specific components of the development process, but that they have the best general overview. Apart from a designer’s quality as a generalist, he/she is specialised in finding forms, i.e. in combining specific components with creativity. The designer also needs technical and economic knowledge in order to compose something. In this production-oriented process the designer is also the “advocate” of the consumer (Heufler, 2004: 7). Designers defend quality, emotion and user-friendliness in order to meet the consumer’s needs. This also means that design must consider consumers’ desires such as environmental sustainability.

A designer is form-giving or form-building (*gestaltend*). The industrial designer is also actively involved in the process of industrial production. His mission is to form industrially produced goods for individuals and masses. In the end it is the designer who is responsible for the quality of a product. Objects that become part of our environment are an integral element of our cultures. In this sense, the designer is involved in the shaping of cultural processes and of social change (Heufler, 2004: 12). Here he acts in a similar way the development worker does. The latter, too, tries to implement ideas and plans in order to stimulate social change.

2.6 Contemporary Definitions of Design

The International Council of Societies of Industrial Design (ICSID) defines design in the following way:

“Design is a creative activity whose aim is to establish the multi-faceted qualities of objects, processes, services and their systems in whole life cycles. Therefore, design is the central factor of innovative humanisation of technologies and the crucial factor

of cultural and economic exchange" (ICSID, 2009). It strives to find and evaluate structural, organisational, functional, expressive, and economic relationships.

Furthermore, the ICSID sets itself and the entire design profession the following tasks:

- Enhancing global sustainability and environmental protection (global ethics)
- Giving benefits and freedom to the entire human community, individual and collective
- Considering social ethics for final users, producers and market protagonists
- Supporting cultural diversity despite the globalisation of the world (cultural ethics)
- Giving products, services and systems, those forms that are expressive of (semiology) and coherent with (aesthetics) their proper complexity

The scope of responsibilities is broadened even further by the ICSID's description of its areas of competence:

"Design concerns products, services and systems conceived with tools, organisations and logic introduced by industrialisation - not just when produced by serial processes. The adjective "industrial" put to design must be related to the term industry or in its meaning of sector of production or in its ancient meaning of "industrious activity". Thus, design is an activity involving a wide spectrum of professions in which products, services, graphics, interiors, and architecture all take part. Together, these activities should further enhance - in a choral way with other related professions - the value of life" (ICSID, 2009).

This definition is representative as it is formulated by an international design organisation that represents many national design agencies. It is broad and especially underlines the responsibilities of the discipline. It incorporates all humanist and idealistic potential of the industrially produced material world we live in, evading

to link the culture of mass consumption directly to design. The critical stance of design theory, claiming what it could and should be, is widespread but rarely executed. In the following section I will elaborate on this phenomenon, exemplified through the Design-Science paradox outlined in the section 1.2.4.

2.7 Design Theory

2.7.1 Appropriate Design

Victor Papanek, a designer and design theorist, is perhaps the most prominent advocate of socially and environmentally responsible design. His most famous work “Design for the Real World” (1972) is regularly quoted in the context of responsible design. Influenced by the rationality of Bauhaus and the Ulmer Hochschule approach, he states that design that results in objects that do not fulfil their functions, is bad design.

The quality of design is defined by its different functions. However, it is the function the designer gives priority to that decides the final form of an object. Papanek is very pragmatic and illustrates his position through examples, such as cars that should be designed to be as safe as possible, rather than fast or associated with social status.

He also deconstructs the myth of the average user which he perceives to be a very vague model of a person that supposedly encompasses the general needs and wants of the entire population. The masses are not homogeneous but are made of children and old people, of people with handicaps, left and right handed people, very tall and very short people, people that rely heavily on visual perception, while others rely on acoustic perception; there are males and females, and so on. Essentially, Papanek is questioning the term “needs” in itself and points out that most of what is produced and designed, does not fulfil real needs at all. Papanek therefore propagates a practice of design in which designers sacrifice ten percent of their work time in order to help projects that benefit disadvantaged people, such as persons with handicaps, the homeless, developing countries, etc. His approach prioritises

basic needs, which he defines as food, water, shelter, education and security, at the expense of social symbolism and aesthetic functions (Papanek, 1972).

E.F. Schumacher, who worked together with the economist John Maynard Keynes coined the phrase: “Small is Beautiful: Economics as if People Mattered”. Schumacher is often cited in design literature besides Papanek in order to promote the use of appropriate technologies – i.e. technologies that are adapted to local needs and that contribute to the empowerment of the developing nations (Fiell, 2000: 616). Accordingly, Schumacher wrote: “[T]he best way to make contact with the essential problem is by speaking of technology. Economic development in poverty-stricken areas can be fruitful only on the basis of what I have called ‘intermediate technology’ (…) a different kind of technology with a human face which, instead of making human hands and brains redundant helps them to become far more productive than they have ever been before” (Schumacher, 1973: 154-168).

Literature on intermediate or appropriate technology rarely refers to aspects of design. Although the functions of objects are central to what is ‘appropriate’ for development purposes, there are few cases in which design is explicitly considered. One example of such an attempt at including a design concept will be illustrated in chapter 2.8 by the UNIDO.

2.7.2 Marxist Design Theory

The relatedness of design and industrialisation suggests the use of an approach from a historic materialism perspective. Marxist theorists focus on the underlying forces of production and design with an emphasis on economic structures.

It is observed that the main goal of manufacturing artefacts, of which design is an integral part of the process, in a capitalist society has to be to generate profit for the manufacturer. The artistic aspect of design, no matter how much creativity and imagination are put into an object, is not an instrument for the designer to express him- or herself, but purely to make the manufactured products saleable and profitable. (Forty, 1986: 7). Gert Selle writes: “Objects of every day use do not need a

high level of explaining to legitimise their design. The application of the object should facilitate its use, the solution is found in the user-sphere. The reality of production however follows different laws, leading away from the needs of the end-user away from the functionality of the object forcing towards superficial changes and manipulation." (Selle, 1997: 98) Superficial changes refer to common design practices such as 'styling' – which denominates the adaptation of an object in order to make it look newer, better, more modern, and more attractive for consumers who might already have one item but should be persuaded to buy a new one (Fiell, 2000: 672). Another practice is 'planned obsolescence' – the intentional short-term durability of objects which forces consumers to buy new items quite regularly.

The assurance that the objective of design is to meet the needs of the people is fundamentally questioned by Marxists, and the hegemonic theory of design is identified as an agreement of the ruling class. Vilém Flusser wrote about the etymology of design, pointing out the disguising meaning of the word "de–sign" in which information is negated (Flusser, 1999).

Selle (1997: 102) describes how these ideological aspects of design are institutionalised: "The 'normal' every day user/consumer relies on a code taught by the educational system, media and the product itself to identify, decode and understand a product. The understanding of 'good' form is not included in this scenario being a privilege of the higher educated classes – it becomes the expression of a class-specific norm." Furthermore, "the social promise of design to cover the aesthetic and cultural basic-needs of the consumer authentically, are not realised. It proves to be a mere instrument to build a superstructure of the practices of production with the goal to maintain the status quo" (Selle, 1997: 110). Thus, "the supposed production of cultural goods proves to be the reproduction of the fetish of consumption" (Selle, 1997: 104).

The critique on this point of consumer-sovereignty is refuted by Jürgen Habermas who claims there is no consumer-sovereignty anyway as production is led by market-analysis, rather than responsible needs-analysis on a socio-psychological level of society (Habermas, 1965: 217). Furthermore, limited purchasing power can limit consumer sovereignty.

Designed objects as carriers of function and information have an inherent product-language (Selle, 1997: 13). Similar to spoken languages, products are symbols that send messages. They produce and re-produce social relations and structures of power. Design is hardly portrayed as an instrument of the ruling class, but instead promotes itself as serving society and the human needs. Therefore it can be suspected of covering up or disguising the conflicting interests of producers and users either on purpose or by chance (Selle, 1997: 24). Jürgen Habermas writes that, social actions constitute themselves in colloquial communication. But language is also an instrument of agency and serves the legitimation of relations of power in society. As long as language does not explicitly express these power relations but merely legitimises them, it is ideological (Habermas, 1971: 52). Design, therefore, represents an agent of the hegemonic ideology.

The question that poses itself at this point is on the role of the designer. “Manufactured goods have varied in appearance, not because of the immorality or wilfulness of their makers, but because of the circumstances of their production and consumption” (Forty, 1986: 13). The problem-oriented strategy of designers is thus contradictory in itself because problems are defined in terms of relationships of humans with their technological environment. Simultaneously, technology is directly related with its economic environment. This paradox of economic decisions based on the premises of the necessity of economic growth, increasing productivity and more profit stand in stark contrast to the supposed objective of solving human-environmental problems (Selle, 1997: 22).

Adrian Forty (1986: 11) summarises the relevance for development:

> “What is described as progress in modern societies is in fact largely synonymous with the range of changes brought about by industrial capital. Among the benefits are more food, better transportation and a greater abundance of goods. But (…) each beneficial innovation also brings a sequence of other changes, not all of which are desired by all people so that, in the name of progress, we are compelled to accept a great many distantly elated and possibly unwanted changes. The steam engine for

> example brought greater efficiency to manufacturing and greater speed to transport, but the making of it helped turn master craftsmen into wage labourers and caused towns to grow in size and to become unhealthy. The idea of progress, though, includes all changes, desirable as well as undesirable."

Design's concealing and transforming powers, according to Marxist theory, are essential elements of the development of modern industrial societies. It is not its potential for satisfying human needs but its role in the fetishisation of consumer objects that is decisive.

2.7.3 Design and Dependency

Linked to various imperialism-theories and in contrast to the modernisation theories developed in the West which claim that underdevelopment is generated from within the countries themselves, a new set of theories developed in Latin America. The so-called dependency theorists such as André Gunder Frank and Raúl Prebisch interpret the economic ties between the West and the developing countries as a system of one-sided dependency. Underdevelopment is hereby caused by external factors. The industrialised countries and former colonial powers, so the dependency theorists, abuse the trade-ties from their former colonies. The West imports cheap primary resources required for the manufacturing of industrially produced goods. This permits it to further develop its own production. This and direct capital-investment, as promoted by modernisation theory, caused the development of one-sided economic structures oriented towards the extraction of resources in development countries. Their elites, those minorities that extract and sell resources, are spending the incoming money on expensive Western consumer goods, rather than investing in the development and diversification of their countries' own economic structures.

Throughout the decolonisation process and the initial euphoria of dependence theory, design had a very strong theoretical backing founded upon the socialist ethos of the 1920s represented in architectural experiments such as Brasilia, Amsara and Chandigarh. In the late 1960s and 1970s there were a number of developing

countries that promoted a national design strategy. The ICSID was founded in 1957 and shows that there were many national design formations. But while the Western ones were mainly directed towards securing a certain degree of quality and education and to assert themselves as competitive on the international markets, developing countries and emerging economies sometimes tried to embed their design strategies in dependence theory. Chile, under Salvador Allende, is one example of such a holistic development strategy. The project came to an end very quickly with Pinochet's coup.

The *dependista* stream of thought is, however, a niche in the world of design theory. Although it aligns itself with critical design theory as outlined above by Papanek, Selle and others, there are only few examples of it being implemented. Originating in the late 1960s in Latin America, its main representative is the German graphic designer and architect Gui Bonsiepe. He was educated at the HfG Ulm but moved to Latin America in 1968. Tomás Maldonado an Argentinean designer and painter who taught at the HfG Ulm influenced Bonsiepe. Both are strong advocates of the Ulm Model. They rely on rationalisation and simplification in order to find the optimal form for an object. They are influenced by the Latin American dependency theorists, a theory they adapted from social, political and economic subjects and applied it to the material world of production and consumption.

Analysing the "typical composition" of developing countries' industries, Gui Bonsiepe discovered that "[t]hey have branch plants which import their technology – including their industrial design – exclusively from the centre [i.e. West]" (Bonsiepe, 1976: 15).

In development strategies focusing on industrialisation, the societies of the developing nations necessarily increase their division of labour. In "The Wealth of Nations" Adam Smith (1776: 344) wrote: "In opulent and commercial societies (…) to think or to reason come to be, like every other employment, a particular business, which is carried on by a very few people who furnish the public with all the thought and reason possessed by the vast multitudes that labour". Thus, the creative, form-giving part of the production process has been singled out as the designer's job, it is not imported alongside the technology and industrialisation process, thus enhancing dependency of the developing countries. Considering the ideological function of

design as described in chapter 2.8, Bonsiepe, Maldonado and others not only see economic dependency but also cultural dependency being enforced through design.

2.8 UNIDO

Design theory criticises itself for not being sufficiently executed in practice. The example of the United Nations Industrial Development Organisation (UNIDO) was one of the few exceptions where design theory was implemented by an official development agent.

Before gaining their independence, the colonies of the Western world served as resource suppliers of petroleum, coal, minerals, and so forth. Their exploitation enabled the rapid industrialisation of European countries and the United States. The transfer of real value was asymmetrical. The economist Kunibert Raffer (2001) describes how the colonies were regarded as properties of the imperialist countries as exemplified in land-seizures, forced labour, and the imposition of religious values, amongst others.

The UNIDO was founded with the aim of supporting the development and growth of industrious activity in developing countries. The problems associated with industrialisation in the West such as environmental problems and social discrepancies are taken into account. “[H]igher-level productivity, real wages and per capita incomes representing economic pay-off from industrialisation outweighs the loss of community, urban squalor, crime, alienation and other ‘discontents’ associated with industrialisation” (O’Brien, 1998: xi). Complementary programmes are supposed to soften these effects without fundamentally questioning the actual industrialisation process.

The main tasks of the UNIDO thus focused on introducing new technologies and on employingthe local population by integrating them into the production process. This integration was limited to certain aspects of the production process, namely the labour-intensive ones. There are several steps in an industrial production process which were not accessible to locals for a variety of reasons:

- Capital – For any industry to develop, capital goods need to be invested. As the populations of most developing countries were not yet integrated into the world market, capital had to be acquired externally through loans or charity.

- Technology – The technology required for an industrial production process and the necessary know-how was developed in the West and was liable to Western patents.

- Produce – Without immediate access to the technology of the production process and without the possibility to decide over the division of labour in this process, there is no point in time where developing countries or their populations could intervene in this process. The quality, quantity and form of output was determined long before technology is implemented. Externalities2 are included in this process.

- Surplus – Not being in possession of neither the input nor in control of the processes of production, there is little claim on the surplus.

Local populations were mainly involved as manual supplement of machinery, supporting the industrial production through intensive labour. The merit of achievement contributes to the allocation of social status in this type of system, thus not only economically suppressing people but also imposing new social values.

At this stage in time, design is immediately involved in deciding about the output of an enterprise. A good example of how a designer may participate in this is Michael Thonet, an early Austrian designer. Thonet developed a method of bending wood with the help of steam in the mid-19th century which permitted him to give chairs a new shape. Looking for an innovative type of affordable seats, he experimented with methods of industrial production instead of elaborating traditional chairs with fashionable décor. He found the form of the chair through its function and by focusing

[2] "Externalities refers to situations when the effect of production or consumption of goods and services imposes costs or benefits on others which are not reflected in the prices charged for the goods and services being provided." (OECD, 1993)

on the production process (Heufler, 2004: 10). By 1856 he had refined assembly-line production and patented his method.

The relevance of this example for developing countries lies in the combination of traditional and new methods. Thonet had some knowledge of traditional carpentry and knew industrial production. Based on the combination of both, he was able to create something new that facilitated the production, but also made sense for the user/consumer; the chairs were aesthetically appealing, comfortable to sit on and inexpensive. By skipping this creative step in strategies of development that focus on industrialisation and the import of technology, indigenous knowledge of material and of traditional forms of production is not only lost; it is also devalued by non-recognition and therefore deeply affects the identity and culture of local populations. Additionally, it appropriated one of the few aspects where ownership could have been obtained in the industrialisation process.

Design developed in the West parallel to and because of the industrial revolution. The industrialisation process itself called for the new profession of a designer. As a vital step in the divided labour process, any development plan involving industrialisation should thus clearly address the inclusion of designers which accompany the industrialisation process. This was evident even back in the 1960s and there were actual efforts to incorporate design as part of a strategy of development on behalf of the UNIDO.

In 1963 the ICSID became a category-B member of UNIDO carrying mainly consultative status with the aim of cooperating on projects by utilising design for the “betterment of the human condition” (ICSID, 2009).

In the archives of the United Nations the term design hardly appears. One example of such a rare occasion is a document about the history of the UNESCO:

”The application of the new educational technology had an impact on school architecture and furniture. In this connection, practical experimental work was carried out for the nomadic schools in Somalia; the visual materials were stored and carried in especially designed kits which could be transported by camels when the schools

were moved to follow the grazing pattern of the flocks and herds" (Valderrama, 1995).

The designer Victor Papanek was directly involved in this project (Papanek, 1972) but there appears to be no follow-up projects of scale. No specific UN-texts revolve around the topic of design and its relevance for development. The concept of design has seemingly been abandoned as an instrument for development and was replaced by the concept of "appropriate technology". There are extensive guidelines and criteria of appropriate technology but not one for design. From a designer's perspective this is disastrous because the form of objects is crucial for its functionality, the mere consideration of the complexity of technology is not sufficient.

The reasons for this exclusion of discussions of design and its criteria in development projects that involve industrially produced goods are hard to find. NGOs and development organisations are protective of their project designs[3] which may give insight into processes of decision-making related to the choosing of a technology or of an object. Speculatively, one can assume that design is not discussed for some of the following reasons:

- Design is difficult to define and thus easier to be left out of any project proposal.

- Design is mostly associated with luxury goods for middle to upper classes and does not comply with prevalent images of development.

- Incorporating designers into the choice of technologies/objects could represent an additional cost.

- The process of choosing technologies/objects for development is mainly based on its cost. Engineers are consulted rather than designers.

[3] "Project design" is to be seen as separate from industrial design, it is concerned with the methodology of realising development goals but refers only to the design of the project, not of specific objects.

However, these reasons do not argue against the inclusion of designers into development projects and their strategies – something that a small percentage of designers and design theorists have been promoting since the late 1960s.

2.9 Sustainability

The beginnings of the concept of sustainable development are often led back to “The Limits to Growth” published by Dennis Meadows et al. in the name of the Club of Rome in 1972. The book was one of the first documents to warn about the breadth of consequences of unlimited growth on a planet with limited resources. Certain concepts developed prior to the book such as that of overpopulation by Thomas R. Malthus were used. In the same year the Stockholm Conference, also known as the United Nations Conference on the Human Environment, took place. For the first time it discussed environmental issues on a global political scale.

Under UN Secretary-General Javier Pérez de Cuéllar the Brundtland World Commission on Environment and Development (WCED) was formed in order to research on the increasing acceleration of the deteriorating human environment and the depletion of natural resources and the consequential deterioration of social and economic development.1987 the Report *Our Common Future* was published by the WCED. It prepared the ground for the Earth Summit in Rio de Janeiro in 1992. The outcome of the summit in Rio was the Agenda 21, a document that displays an extensive plan of action for sustainable development. From that moment on, sustainability became the *leitmotif* for environmental and development politics (Lafferty et al., 1999: 1). The Agenda 21 was reaffirmed in 1997 at a follow-up summit (Rio +5) and again in 2002 at the Johannesburg World Summit of Sustainable Development (WSSD) where the Millennium Development Goals were also included. At the WSSD in 2002, Chapter 8 of the Agenda 21 was reinforced by once again calling on countries to make national sustainable development plans and to start their implementation by 2005.

Sustainability is a rather young topic and “the debate on sustainable development is still a cacophony (hence: discord) of different voices and dialects that try to make themselves understood and to prevail in the new political arena” (Moser, 1999: 194).

2.9.1 Our Common Future – The Brundtland Report

The World Commission defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987:43).

The Brundtland Report concentrates on two main ideas. One is the satisfaction of the ‘”essential needs of the world’s poor” and the other is “the limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs” (WCED, 1987: 43). Based on these constraints the following conclusions are drawn.

Firstly, the report emphasises the human focus of sustainable development because “the environment does not exist as a sphere separate from human actions, ambitions, and needs” (WCED, 1987: xi). Secondly, technology and social organisation are seen as key factors which influence sustainable development. Thirdly, sustainable development is relevant in the present as well as in the future. Although discussions and criticism on these points exist [4], the report takes them as given and concludes accordingly:

“In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations” (WCED, 1987: 46). Of vital importance in this definition is the fact that there is no hierarchy of values. There is no priority of the environment over human needs, or vice versa. On the contrary, the process of development should be one where all requirements work in harmony.

[4] See for example, Wyller, 1991., Amundsen et al., 1991., in Lafftery, 1999.

2.9.2 Agenda 21

Agenda 21 emphasises the importance of international, national, regional and local cooperation. Cross-sectoral cooperation and co-ordination is given equal importance for the implementation of any contributions to sustainable development. Civil societies should be integrated through participation in decision-making processes. The integration of environmental concerns is seen as vital and the exchange of information between all involved parties are necessary prerequisites for achieving sustainable development. Intended as a guideline for projects and strategies of sustainable development, the Agenda 21 remains vague in specific measures highlighting the disparities in needs and circumstances across the globe. There are few universal recommendations for the achievement of sustainable development. Capacity building is referred to frequently in order to compensate for the lack of specific suggestions.

2.9.3 Johannesburg World Summit on Sustainable Development

According to the WSSD Outcome Document, sustainable development is built upon the “interdependent and mutually reinforcing pillars” of social and economic development as well as the protection of the environment (WSSD, 2005).

Indigenous peoples, among others, have disputed this concept at the United Nations Permanent Forum on Indigenous Issues (UNPFII). They claim culture to be the fourth pillar of sustainable development. In their opinion, working towards sustainable development” requires a culturally sensitive approach, based on respect for and inclusion of indigenous peoples’ world-views, perspectives, experiences, and concepts of development” (UNPFII, 2000).

Culture has not yet been included by the UN as one of the main pillars of sustainable development, although it proposes an integrated and cross-sectoral approach and emphasises the exchange of information on behalf of all participants. Taking into consideration the traditional knowledge of indigenous peoples, as well as different concepts of development seems to fit into this idea. “The Forum recommends that

agencies and bodies of the United Nations and other inter-governmental organizations rethink the concept of development, with the full participation of indigenous peoples in development processes, taking into account the rights of indigenous peoples and the practices of their traditional knowledge" (UNPFII, 2000). The recommendation of the UNPFII has not yet been implemented fully.

2.9.4 Summary: Sustainability in Theory

It seems that there is agreement in the discussion about sustainable development on one issue: There is not one single strategy for achieving it. Nevertheless, the concept is still revolving around the idea that there is one ideal path that leads to sustainable development: "Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecologically possible and to which all can reasonably aspire" (WCED, 1987: 44). This was already recognised by the UN Body in the late 1980s, but there exist no suggestions for policy measures which specifically promote this. Regarding the value-production in the West the majority of incentives for green movements have come from organisations of the civil society which, in turn, were answered by the private industry in search for profit. Thus, sustainability, although not clear in its definition, sets a normative framework for development claiming sustainability to be an aim of development on the one hand and a strategy for achieving development on the other hand (Lafferty, 1999: 3, Malnes, 1990: 5).

2.9.5 Sustainable Design

Sustainability is also an issue for designers, even if design is not mentioned in any of the documents outlined above. The discourse at a design conference in Ulm in 1988 sketches the general debate amongst designers:

"To achieve a sustainable society we need to describe and realise a system of trade, production and organisation that is in each of its actions sustainable and reproducing. Even the most successful firms, measured by the 'triple bottom line' of economic prosperity, ecological quality and social justice, can only be sustainable if the surrounding institutions and markets are compatible and supportive of this. Larger efforts need to be made on the level of global institutions and markets" (Bierter, 1988: 97).

Another participant of the same conference addressed the problems related to the distribution of Western products and the promotion of unsustainable ways of life: "A serious problem is that perceptions are strong all over the world that the good life is synonymous with the material intensive and wasteful lifestyles of the Western countries. Increased trade and FDIs facilitate the transfer of production and consumption patters of the North to the South. Some of these systems are influenced by the sustainable development agenda, i.e. are environmentally sound. The vast majority of the technologies transferred, however, are unsustainable (…) Although the environmental impacts of economic growth are widespread, the benefits of post-war prosperity have not been shared equally throughout the world" (Wijkman: 1988, 110).

Conclusively the speakers at the conference identify the problem, that efforts to inform consumers about environmentally sound goods and services are minuscule compared to advertisement expenditures in the Western world. The real challenge lies in ensuring that developing countries do not make the same mistakes as OECD countries in the course of the modernisation of their economies. (Wijkman, 1988: 114-119). This can only be realised through innovations in technology, behaviour, and social systems (Rademacher 1988: 136).

Once again this indicates a broad field of tasks for designers. At the Ulm conference they formulate their role in the context of international development: "Design thus stands before a challenge: It is not purely the finding of a material form, but also the designing of the immaterial, the invisible. Ideas, visions, imaginations need to be conveyed aesthetically for the ideas to grasp and develop into convictions which then turn into actions" (Henn 1988: 166).

An example for this type of innovative thinking can be found in “Cradle to Cradle” by William McDonough and Michael Braungart. The two authors try to view the relationship between industry and environment in a new light. Rather than stating a simple explanation, like “industrialisation is bad for the environment”, they propagate a rethinking within the industry. Designers should take nature as an example. A tree produces thousands of blossoms in order to create another. This is not considered to be wasteful or inefficient, but it is perceived as beautiful and as highly effective. (McDonough and Braungart, 2002: 155).

This concept of sustainable design suggests that future technologies must function primarily within ecoregional patterns and scales. They must be based on an understanding of pattern, maintain biodiversity and functional integrity, and honour wide-scale ecological processes. (Bailey, 2002: 97)

A holistic view of nature is necessary and reductionism in the sciences needs to be exchanged for a more integrated approach combining macro-views with micro-views, (see also Bailey, 2002: 17)

Ecology-based design needs to respond to the ecoregion, taking into account the relationships between soils, vegetation, materials, climate, culture, topography and the fauna inhabiting it (Bailey, 2002: 59). Bailey comments further on this subject by suggesting ecoregional mapping as a tool to compare similar ecoregions across the globe. This would make it possible to look at local indigenous solutions to problems that might occur in other regions. Based on these considerations, Bailey (2002: 129) promotes the transfer of knowledge between regions with similar problems.

Ecological design is, “design that minimizes environmentally destructive impacts by integrating itself with living processes.” (Van der Ryn, 1996: 18) A sprawling city landscape, for example, without public transport systems will rely on motor vehicles and require parking spaces which need to be included in its design. (Bailey, 2002: 63). Designers pursuing sustainability in their work are aware of the necessity for a holistic approach to the subject. It needs to include various factors from social behaviour to proper policy embedding. In contrast to development studies, designers also recognise the importance of creative and unconventional thinking to achieve

such holistic strategies. They try to work outside the confining existing economic and political structures. To illustrate the particular approaches to development by designers further, some examples of design for development projects will be described below where these aims are represented either more or less successfully.

2.10 Design for Development

This section discusses the relevance of the theoretical discussions for the practice of design in the context of development through a few selected examples.

2.10.1 Jock Brandis – The Full Belly Project

The mission of the Full Belly Project is to design and distribute income-generating agricultural devices in order to improve life in developing countries mostly in Africa. This is achieved through the invention, design, construction and the distribution of technology or objects that are adapted to the specific socio-cultural situations of local populations, such as nut-shelling devices that are generated by a foot-pedal for village-based development. According to its website, the projects and technology are developed in "collaboration with locally based social entrepreneurs" (www.thefullbellyproject.org). Simultaneously the project educates locals and develops marketing strategies.

Evaluation is based on the increase of economic activity of the target groups.

2.10.2 Design for Development (DFD)

Design for Development is a Canadian charity organisation. This NGO is "dedicated to using design as a problem-solving tool to address issues in poverty-stricken areas of the world." DFD aims to "reduce poverty and increase community self-reliance through demonstrated and advocated use of the design process." as it states on its website.

DFD tries to understand and meet needs with design in Kenya and Namibia. The problem that DFD approaches is low mobility due to poverty, the lack of possibilities of transportation and the lack of infrastructure, which manifests itself mainly in bad roads. The resulting long distances that need to be covered to reach health centres are additionally difficult to overcome as any form of transport is bumpy and unsuitable for the injured or sick. Their solution to these problems lies in a bicycle made of bamboo with a kind of trailer attached to it.

The “Bambulance” is an attempt at sustainable design that supports self-reliance: “we focus on working with the end-user, utilizing local materials and means of manufacture, and on maximizing opportunities for skills transfer and education. During project implementation, DFD provides training to local trades people in the manufacture of resulting designs as well as in basic design and marketing skills. (…) Using technologies appropriate to the communities we're working with,” (www.designfordevelopment.org). DFD also promotes educational programmes in design schools to raise awareness among future designers

The organisation’s website does not define its concept of sustainability, nor does it mention reciprocity or mutual learning. It talks of the transfer of skills and training of locals which does not imply that there is an attempt to exchange information and to learn from local knowledge. The website also lacks a discussion of the concept of appropriate technology and a definition of its criteria. There is no evaluation available for this project.

2.10.3 Design for the Other 90%

A plethora of design solutions for developmental purposes was presented at the Cooper Hewitt Exhibition “Design for the Other 90%” in New York in 2007. Unfortunately, there is little information as to how these projects were developed and hardly any information on the evaluation of the projects. Nevertheless, here are some examples from the website (http://other90.cooperhewitt.org) :

- A ceramic water filter developed in Guatemala makes drinking water available for about 500,000 households according to its website. 16 small production facilities all over the world enable this. The project was initiated by Potters for Peace, a US-based NGO.

- Solar-Aid is a solar-powered hearing aid developed in Botswana which does not require expensive batteries. Godisa Technologies commercially distributes these in developing countries. Solar-Aid is the outcome of problem-oriented design aimed at helping the 278 million people in the world affected by moderate bilateral hearing loss or worse (WHO, 2006: 1).

- The Kinkajou microfilm projector and portable library aims at teaching the illiterate in rural, non-electrified regions in Africa at night with solar-powered LED lamps.

The website does not show any evaluations. There is a mixture of projects from private industry and non-governmental organisations.

2.10.4 One Laptop per Child

This prestigious and strongly media-present project was initiated by Nicholas Negroponte. Its mission statement is to make laptops available especially for children that live in poverty and thus include them in the possibilities of the internet to encourage them to learn. The design of the laptop was central to this project as the laptops are not designed to become obsolete within a few years as in the Western world, but are intended to survive different climatic extremes, alternative power sources than electric plugs etc. (http://laptop.org).

The idea itself to design a laptop that lasts and is compatible with different environmental influences would make sense for most laptops, but this is a prime example where the designers are thinking outside the hegemonic production and consumption patterns. The designers attempted to create something durable and of high value that is affordable – this is in sync with critical design theory.

Evaluations are to be awaited as the project has not been running that long.

2.10.5 Well-Tech Innovation Technology Award

The Well-Tech Innovation Technology Award is an award for innovations that are aligned with development goals. It draws on the concept of sustainability as defined in the WCED Report. Innovations are evaluated regarding the following criteria (www.well-tech.it):

- The reduction of raw materials by a factor of 10
- Eco-compatibility, anticipating a products entire life-cycle from production to disposal
- Energy savings by reducing consumption, eliminating carbon production and the transition to renewable energy
- Form: the aesthetic quality should ensure that the user can relate to the object
- Ergonomics: the psycho-physical needs of the user need to be met
- Accessibility: facilitation of use, i.e. safety, understandable components and symbols

Award-winning designs include everything from high-tech solutions such as GPS-like eco-navigators to simple solutions like bio-degradable children's toys. The majority of the projects are directed towards improving the typical Western lifestyle towards being more sustainable rather than focusing on poverty in developing countries.

2.10.6 Index: Design to Improve Life Award

In its effort to "improve life" with design, the organisation Index assesses design using three categories (www.indexaward.dk):

- Form: The formal aspects of design are judged considering shape, material, colour, consistence, interface, and aesthetics, among others.

- Impact: The design's dynamic and positive contribution to the world is assessed in this category – relevance, function, potential distribution, level of innovation, economy, sustainability, user-friendliness, scope of the solution, etc.

- Context: Evaluation of the addressed problem, the number of people affected by it, the level of urgency, culture, geography, infrastructure, ethics of the community, etc.

Projects handed in for this award include information systems for promoting awareness for development issues such as the "Gebrauchsinformation für den Planeten Erde"[5] which promotes sustainable living in the form of a pharmaceutical package (www.neongruen.net). Many of the projects handed in for the Well-Tech Award or presented at the Cooper Hewitt Exhibition were also handed in at Index, such as the "Lifestraw", which won this award in 2005. This is a portable straw device to filter water and make it drinkable. Evaluations of the projects in practice are not included in the award criteria.

2.10.7 Summary: Design Projects

The difficulty of analysing these projects lies in the lack of available evaluations and/or in the non-existence of appropriate instruments to measure their impact on

[5] An allusion to the designer Richard Buckminster Fuller's book "Operating Manual for Spaceship Earth" (1969) that depicts a holistic philosophy for sustainable living.

development. Only a few projects, such as presented in the Well-Tech Award, focus on solving problems in the West which are exported to the rest of the world. The majority of projects that fit in the category of “design for development” actually focus on developing countries and orientate themselves towards the ideas of Papanek. They focus on the ‘appropriate’ aspect of technology by neglecting aesthetic elements and avoiding high-tech solutions. One more typical example is the frequently cited wind-up radio by Trevor Baylis, which is mentioned in every standard work on design for development, but is essentially nothing more than exactly that: a wind-up radio. Also, nearly all of the projects concentrate mainly on the object of design. The form, level of technology and application of the object are taken into consideration while the underlying structures of their production are rarely questioned.

The language used to describe their work reflects the development discourse. But because of the lack of evaluation available, it cannot be decided whether ‘partnership’, ‘sustainability’ or ‘ownership’ are actually realised in practice.

Design and development are transdisciplinary fields. Their practitioners try to find solutions to a wide range of problems by using a cross-sectoral approach and paying attention to inter-linkages. At the same time development and design differ in: the networks which they have access to and the processes gone through to find solutions. The aim of the designing process is to determine the perfect form of an object. This object should fulfil a function that solves fundamental problems. Development basically has the same objectives. These objectives are realised not through an object but sometimes with an object.

3 Design as a Governmental Strategy

The previous chapters explained that design is one step in the process of industrial production and that objects are intrinsic to our life styles. Design is a transdisciplinary field and designers face the problem of not having a clearly defined profession. This is further complicated by the fact that design theory and its practice do not coincide and are not coherently related. Within development studies, design receives little to no attention at all. Nevertheless, literature on consumerism, anthropological studies of product and material culture, technological development and technology transfer, theories of need and/or desire, among others, reflect the apparent interdependence of design and development. On one hand, the neglect of design in the development discourse is due to the cultural connotations of design. It evokes images of luxury, aesthetics and quality. And on the other hand, it is due to the complexity of the design discipline and its internal dilemma of confining itself in its responsibilities, i.e. defining itself clearly.

The relevance of design for development will be discussed through the comparison of two specific case studies. Both cases represent political systems that are not only different from each other, but also different from the dominating Western systems.

3.1 The German Democratic Republic

In the past decade or so, Germany experienced the revival of artefacts and fashion goods associated with the German Democratic Republic. This phenomenon of popular culture is frequently called "*Ostalgie*", a pun deriving from the German word *Nostalgie*, omitting the first letter to mean: nostalgia for the East. In 2003 the film "Goodbye Lenin!" marked the peak of this trend. In an article on that topic that appeared in "Der Spiegel" in 2007, its author states: "Whoever left their RFT-Radio, Simson-Moped and Mitropa-crockery as burial object for the SED on the garbage dump of history will regret it: 'Industrial form-giving' from the East is considered to be hip till ingenious." A number of East German design exhibitions in the past few years

demonstrate the connection made between a gone product culture and an entire system now belonging to the past.

With the establishment of the German Democratic Republic in 1949, East Germany took a decidedly different development path than Western Germany. The occupation by the allies and the funding through the Marshall Plan set the “economic miracle” off, which West Germany would experience. East Germany on the other hand, became a member of the eastern European community of socialist states and of the Warsaw Pact, which was formed and controlled by the Soviet Union. The Socialist Unity Party of East Germany (SED[6]) came to power in 1949 and was responsible for realising the “dictate of the proletariat”.

Design in East Germany had certain parameters which defined its contribution to the state’s concept of real socialism. However, the East German system could not withstand the Western civilisational model. The fall of the Berlin Wall in 1989 and the peaceful consolidation of East and West Germany were accompanied by a wave of Western consumer goods flooding the East. As a result, most industrial goods from the East were no longer produced. Günter Höhne describes this as the ”revolution spreading into the East German households” while goods from East Germany piled up on garbage dumps (Höhne, 2008). This event represents an unusual phenomenon in which an entire nation underwent a product revolution in the short time span of a few months. Over a period of about 40 years a unique product culture had developed. With the fall of the Iron Curtain it suddenly disappeared.

On the following pages I will describe the political and economical context of the East German Socialist Realism in order to illustrate the role of design in its development strategy.

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[6] From the German: The “Soziale Einheitspartei” (SED) was founded in 1946 through the fusion of the Social Democratic Party (SPD) and the Communist Party (KPD) in the Soviet-occupied zones of Germany and specifically East Berlin. Supported by the Soviet Union, it came to power in 1949 and led the country in a communist, Marxist-Leninist tradition until 1989.

3.1.1 Historical Context

After World War II Germany was divided. Its Western part was occupied by the allies and its eastern part by the Soviet Union. The early years of East Germany were marked by consolidation of the SED which was forming the new German Democratic Republic (GDR). The main characteristic of Socialist Realism was a centrally organised state that planned the economy. The economic system was based on the central allocation of resources in a non-monetary form (in natura); production was planned in physical terms and quantities of inputs were rationed among users. Outputs were distributed with specified allocation plans. (Mandelbaum, 1993: 20)

The party's main policy aims for the young republic were:

- Satisfaction of the Soviet bloc's economic-political aims,
- Full employment, and
- Meeting the demands of the consumers (Sleifer, 2006: 22).

How these aims were pursued and how design was affected, as well as how it functioned within this planned economy will be discussed in the following.

3.1.2 Soviet Influence

Soviet demands in industrialisation were also met through the expansion and development of heavy industry (Sleifer, 2006). Design did not play a huge role in this sphere of industrial production that relied more on the skills of engineers. The first Five-Year Plan was elaborated according to the Stalinist model. It covered the years from 1951-55 and a second one started in 1958. Schultz (1999) describes the process of "socialist industrialisation" as a strategy focused on the development of heavy industry. The Stalinist ideology allocated a major part of the resources to primary and secondary production while neglecting consumers' needs. The population was expected to make sacrifices in terms of material wealth, such as

household items, cars, toys, and so forth.

Soviet influence also relates to design through the extension of resource allocation. Many resources such as iron ore were attained from the Soviet Union, although they could have been obtained from other sources. In the case of iron ore this could have been Sweden.[7] Resource shortages often led to production shortages and required a certain amount of improvisation by designers and engineers in order to fulfil assigned quotas.

3.1.3 Employment

The imperative of full employment also influenced industrial production to a certain extent. It promoted extensive growth rather than intensive growth resulting to technological backwardness that directly affected design processes. The Soviet Union encountered serious difficulties at the end of the 1960s in its development efforts. The lack of advanced technologies impeded the implementation of its industrialisation plans. After a forced industrialisation under Stalin, the leap from low-processed industrial and agrarian products and the export of primary resources, to the export of modern goods which would be competitive on the world market was not possible due to the lack of technology and the necessary know-how (Berend, 1996: 198). East Germany was a special case in this regard and perhaps not as strongly affected by this strategy as other Soviet bloc countries because transition occurred with ample support from West Germany. Even before the reunion, East German export numbers were amongst the highest in the Soviet bloc.

[7] Gayko (2000) discusses the location of industries according to Soviet interests rather than efficiency with the example of Eisenhüttenstadt, an industrial centre for the production of iron and steal which was built near the Polish border rather than in Rostock where it would have been more profitable for the GDR.

3.1.4 Consumer Demands

Resource availability and technological development were vital factors in fulfilling policy aims to meet consumer demands. Consumer demands were, on one hand, defined by basic needs in the years after the war, and later by a conception of welfare and a standard of living in which the benchmarks were set by the economically quickly advancing West. At its first party congress, the SED proclaimed as its goals to secure basic needs and to raise the standard of living. By 1958, Walter Ulbricht, General Secretary of the SED from 1950-1971 "declared that the chief economic task was overtaking West Germany in per capita consumption of all important food items and consumer goods by 1961" (Kopstein, 1997: 43-44).

This direct comparison and open competition with West Germany is discussed by Kopstein (1997). Kopstein describes the easy comparison of life styles between East and West before 1961 when borders between East and West Germany were still open. Later on, Western life style was communicated through Western television which was received in East Germany. It portrayed an ostentatiously wealthy society in comparison. From a developmental perspective this could be interpreted as a form of relative poverty[8]. The concept of relative poverty goes beyond basic need fulfilment, and is mainly defined through the relative lack of choices. Consumerism is important for the practice of design in East Germany and is discussed in more depth in the next part.

3.1.5 Consumer Goods and Consumption

Consumption in East Germany can be regarded in comparison with West Germany, but was essentially different in several aspects. In contrast to a capitalist system, the

[8] Beaudoin defines relative poverty as a concept that goes beyond "the question of survival to incorporate accessibility to what society as a whole values. Focusing more on living standards (…), access to healthcare, and disposable income, relative poverty shifts the spotlight from minimums to averages, both within individual communities and countries, and among the other nations of the world as well. (…) need and want are defined contextually." (Beaudoin, 2007: 5). In comparison, there is a concept of absolute poverty, most often represented by the World Bank that measures poverty in income levels of less than US$ 1/day (for developing countries).

central government of the GDR was effectively in control of the supply side. The SED set production targets, allocated resources, and bore the risks. In the early years, the SED focused on covering the basic needs of society. The first goods were adapted from old war utensils. Old gas mask containers were transformed to milk cans, swords to ploughshares, and so forth (Höhne, 2008). As mentioned above, "needs" were defined very narrowly, limited by party definition, which was in turn influenced by Stalinist ideology. Resources were allocated to heavy industry, and consumer good production was neglected.

After a spontaneous, nation-wide uprising in 1953 that was settled by Soviet military intervention, the SED intensified security measures by strengthening the *Staatssicherheit* – the secret state police, and through a "tactic of consumer concessions to buy off possible mass political unrest" (Fulbrook, 2009: 269). In full power of the supply side, the government instrumentalised it to incorporate the population and avoid serious opposition to the regime. It did try to educate the consumer, and promoted the sharing of durable goods such as washing machines and refrigerators, an idea that is also promoted by Papanek. Moreover, under the influence of Chrustchev private motorisation was rejected and only communal driving was encouraged (Wolfrum, 2008: 74).

In the early 1960s, as Erich Honecker gained political influence in his position as Central Committee Secretary for Security Matters, a strategy of cultural liberalisation was initiated. From this moment on, greater emphasis was laid on the development of East German culture. This culture should contrast the class-biased culture of capitalist West Germany. Honecker envisioned a society of "consumer socialism" committed to an increase of its standard of living (Fulbrook, 2005: 246). Increased governmental regulation of production and tighter ideological frameworks were meant to ensure this independent development strategy. The influence of the state will be discussed in more detail in the next chapter.

Once a product passed the ideological test, it was evaluated according to the available resources its production required. Several prototypes intended for domestic consumption, from furniture to electronic goods, never went into production. In Dresden, central art exhibitions took place every four years. There, industrial

designers exhibited their prototypes and new designs of products. Nevertheless, visitors and the media complained about the unavailability of these aesthetically appealing and useful objects. Advertisement for consumer goods was banned in the 1970s and the SED directed the media "not to provoke desires for new goods"[9] (Schubbe, 1972). This is a fundamentally different approach to consumerism than in Western culture, which heavily relies on advertisement, especially with increasing market saturation, in order to create materialist desires and thus to stimulate economic growth.

Nevertheless, the SED's corporative politics showed positive results in the number of distributed consumer goods: The comparison between East and West Germany shows by 1988 that, 99 percent of East German households were in possession of a washing machine and a refrigerator, 96 per cent had televisions, although only 52 per cent were colour TVs and 52 per cent had a car. West Germans were quite saturated too, with 99 per cent having washing machines, 98 per cent televisions, of which 94 per cent were in colour, and 97 per cent had cars. The corresponding figures for East Germany in 1970 had been 54 per cent owning washing machines, 69 per cent owning televisions (not in colour) and 16 per cent possessed a car. The biggest numerical differences remained in the ownership of telephones: by 1988, 98 per cent of West German middle-income households had a telephone, while only 9 per cent of East Germans did (Fulbrook, 2009: 192).

Compared to neighbouring Poland and the other Soviet bloc countries, East Germany had much higher standards of living, a five-day labour week and relatively saturated markets. But Western television showed a paradise of consumer's choices, resulting in a perceived lack of consumer options in the GDR's population (Wolfrum, 2008: 75). This was cause for general discontent, but it did not suffice for provoking massive revolts (Kopstein, 1997). As was commonly said in internal circles of leading figures of the nation: "they might not like it but at least they have some." (Fulbrook, 2009: 193).

Particularly noteworthy is the fact that the purchasing power in East Germany was

[9] German original: "Keine (Waren-) Bedürfnisse wecken!" (see: Schubbe, 1972)

not low. Imported goods and GDR products which were intended for exports, were very expensive; but savings rates were unusually high. “Given the high proportion of employed women, there was a high proportion of two-income families. The problem was not lack of money but goods to spend it on” (Fulbrook, 2009: 192; see also: Wolfrum, 2008: 75). The reasons for this shortage of goods can be led back to the double-tracked production system, that was divided into separated spheres for export-oriented and for domestic-market production.

3.1.6 Production

Production output depends on the amount and the quality of the input. In a classical capitalist system, the aim is to create surplus value through production. In East Germany, production aims were defined differently, if only to a certain degree. Production was subject to different internal rules and was influenced by numerous external factors.

The GDR was smaller than West Germany; it had fewer natural resources and less industrial infrastructure. Large areas of the north-east were dedicated to agriculture, and all big shipyards in the north belonged to West Germany. Additionally, the East did not benefit from the US-Marshall Plan or some equivalent; and industrial facilities that had survived the war were largely dismantled by the Soviets as payments for reparation. Approximately a thousand businesses were affected by reparation up until 1946; the entire second line of the East German rail network was moved to the Soviet Union and by the end of the 1980s all GDR exports were sold to the former occupiers with a discount of up to a 30 percent (Höhne, 2008). From the start, East Germany was in a disadvantageous position concerning resources of all sorts.

3.1.6.1 Export Production

In addition to these economic pressures, since the 1970s there was increasing political pressure to export to the West in order to demonstrate the country’s

successful modernisation and the superiority of the socialist system. Internally, the slogan "The best for the Workers"[10] was advertised by the new *DDR Industrielleformgestaltung* (East German Industrial Design) on a poster for the Hochschule für Bildende Künste Dresden; it illustrates the GDR's planned economy. By the 1980s, much of the products designed in East Germany never reached the workers they were intended for in theory; they had to be exported in exchange for foreign currency, which was required to obtain the resources for industrial production (Höhne, 2008).

The standards for the design of products, which were to be exported to Western countries, were entirely different from the standards of domestic-market production. Longevity and quality of the export products were sacrificed in favour of product cosmetics and an elaborated packaging culture. These were the self-proclaimed requirements of large Western contractors which ordered furniture and consumption goods from the GDR's industries. The products should be cheap but modern-looking, in order to sell them expensively (. After the expiration of the guarantee, the products should deteriorate rather quickly, so consumers would buy new items (Höhne, 2008). "Styling" and "planned obsolescence" were common practices in reaction to the saturation of Western markets; they form part of the capitalist system of mass consumption (Fiell, 2000: 672, 646).[11]

3.1.6.2 Domestic Production

The domestic-market production faced even harder restrictions in the allocation of resources and in its production capacities, compared with the GDR's export-oriented production. Technologists, constructionists, and designers had to make special efforts to counter the misery according to the slogan: "Necessity is the mother of invention". Höhne, a design historian and former editor of the East German design magazine "form + zweck", describes the properties of GDR's domestic designs:

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[10] German original: "*Das Beste für den Werktätigen*"

[11] These products encourage a system that is ecologically unsustainable, while communicating to the consumer a false message as the product is disguised to appear better than it is.

“[U]nder these pressures all kinds of technological products for every day use of the GDR population emerged, but also cooking and food containers that were less Western-chic in their formal attire than humbly reserved, unpretentious, timeless and convincing in their functionality through usage-reliability, operability, aesthetic and functional longevity, compatibility, reparability and abrasive durability,” (Höhne, 2008).

In other words, design for the domestic market focused on finding practical and social solutions, even on the ecological aspect of the product; its attractiveness and outer appearance were secondary. As Höhne (2008) describes, a “vacuum cleaner made of plastic did not have to simulate being the little brother of a luxurious limousine and did not require pages and pages of instruction manual to explain how to switch the dust bag”.

Designers were therefore in a position which required them to respond to the most functional and aesthetic needs of the East German population and those of the world market, in order to develop exportable goods that would be exchanged for foreign currency. The spheres of production for domestic markets and for export were entirely different. Höhne (2008) calls the GDR’s export production a “virtual special zone” in businesses and design offices that had barely anything to do with the everyday life of the East German population. There was a parallel development of products and forms. These were elaborated in basically the same production facilities but guided by different regulations.

3.1.7 Ideology and Design

The difference in goals for export and for domestic production was due to the different ideologies, not the expectations of the consumers. Exported goods were styled but of lower quality because in the capitalist system of the West profits are increased by selling goods with short life cycles. Domestic goods were of higher quality and longevity but less in number; they were less modern-looking, and standardised with little variation. However, the guidelines for the design of consumer goods set by the SED were not specifically defined. Basically, the government

promoted an envisioned socialist product culture more or less based on some functionaries' idea of a "socialist aesthetic" that was merely orientated by Marxist theory. In "The Fetishism of the Commodity and its Secret" (1867), Karl Marx describes the dual process of industrialisation and mercantile capitalism; he criticises the orientation towards empty consumerism that stimulates economic growth for the benefits of a small class of capitalists. Reality focused mainly on the superficial aspects of design, placing design in the sphere of artistic activity.

Contrary to the strict regulations for art in the GDR, which affected literature, theatre, painting and music, there were no official general guidelines for design. There was no clear definition of what was first called *Industrielleformgestaltung,* and later known as "product design in socialism". The dictate over artists that existed in East Germany, overlapped onto the design of objects of every day use.

The regime was, for example, against the modernist movement as this had Western origins. To distance itself from this paradigm, it favoured historicism in product design to promote elite culture among the masses. Based rather on a bourgeois definition of culture, and therefore somewhat contradictory to its socialist ideals, the outcomes of industry and construction should reflect the cultural heritage of Germany by imitating historic styles such as baroque, rococo, chippendale, *Gründerzeit*, and others. This practice led to an extended discussion on formalism,[12] because both, designers and consumers alike, favoured practical functionalism as represented by the modern Bauhaus movement.

Radio designs which were inspired by West German design such as the ones that were designed by the East German designer Jürgen Peters, were condemned as objects of "class enemy's taste" and as of "bourgeois decadence". They would not belong to the living rooms of the socialist masses. Even more banal objects such as vases were submitted to the verdict of the SED dictate. Plain white cylindrical vases (sensible from an industrial production process and aesthetically appealing in a modernist Bauhaus sense) were considered to be "inartistic solutions of ideological

[12] The *Formalismus Debatte* was a discourse on Freedom of the Arts under communist rule, for details see, for example: Hütt, 2004.

nature" and condemned as "formalist" (Schubbe, 1972). The vases designed by Hubert Petras were produced; but they had to be decorated with historicist and colourful ornaments.

Plastic was rejected too in the early years of the SED's rule because of its modernist aesthetic. But economic pressures forced the party to reassess these considerations. From the 1960s onwards it was employed as a cheap and durable material and embedded ideologically as representative of socialist values, according to the party slogan "national in form – socialist in content". For the consumers, plastic represented practicality, technological progress, and value, rather than being perceived as cheap and disposable as in the West (Höhne, 2008). So although official parameters were absent, ideology hence interfered with the forming of products continuously throughout the existence of East Germany.

Rudolf Bahro was one of the few intellectuals concerned with the transformation of the "structure of needs" (Fulbrook, 2009: 227). He proclaimed himself to be against unnecessary consumerism and protested against the dominance of the state and the bureaucracy. Bahro also diagnosed problems in the mental and physical division of labour, leaning on the writings of Adam Smith (see: Bahro, 1977). Bahro criticised dividing labour into steps that do not allow the intellect of the workers to mix with purely physical work. Although Bahro was not in favour of liberalism or the free market, but truly concerned about the social structures of the design-production-consumer complex, he was discarded by the SED regime for his criticism.

Part of Honecker's strategy was to provide enough consumer goods for the masses in order to permit a standard of living that would prevent public revolt against the regime. As the production of consumer goods gained importance, state involvement in the design of these products also increased.

3.1.8 Design Policy in East Germany

The possibilities for East German designers to follow tendencies of international design, was quite unproblematic before the Berlin Wall was built in 1961. In these

years, Raymond Loewy's "Ugliness doesn't sell" and "Ulm 1", the first paper of the Hochschule für Gestaltung Ulm, were easily available in the GDR. Scandinavian designer elites such as Alvar and Aino Aalto or Verner Panton and their concept of "democratic design" inspired GDR-designers. These Western designers were considered as inspirational sources for the development of a socialist form of design. However, in East German works on design theory, it never came to a serious definition of what constitutes socialist design. This theoretical gap underlines the difficulties within a system-overlapping consumer world that is subordinated to market forces.

Many products that were produced in the GDR, were not for sale; they were all exported in exchange for valuable foreign currency. The 1960s were advanced considering advertisement and packaging culture when compared to the 1970s and 80s. They represent the climax of East German Design, which was "seeking alignment with the international modernist movement while also bringing forth independent and attractive form and usage solutions" (Höhne, 2008).

3.1.8.1 Independent Design Strategy

The first official text on design processes in the GDR was published in 1971. It has the title "Product Design in Socialism" (rather than Socialist Product Design) and was written by Martin Kelm. As the title of Kelm's work suggests, product design was seen as an external process. Deeper interdependence with the socialist systems of production was not considered. A year later, in 1972, Kelm, a Weißensee graduate who worked his way up in party politics, became state secretary and director of the newly founded Bureau for Industrial Design (Amt für Industrielle Formgestaltung - AIF). In the early 1970s designers in the GDR rediscovered Bauhaus design and were allowed to do so. Earlier, it was considered suspicious and anti-socialist by the SED.

The AIF was responsible for the strict ideological control of design processes, for the implementation of governmental directions in GDR businesses, and for the issuance of awards and grades. It restricted freelance designers to control material culture

production more efficiently. The AIF was less a design centre by or for the creatives, than an instrument of the SED's economic policies. The founding of Kombinate – national business conglomerates – proceeded parallel to the depletion of trademarks and brands. Still produced by half-private companies before the 1970s, products such as "Erika" typewriters, "Omega" vacuum cleaners, and "Komet" household goods had to be replaced with new Kombinat-names such as "Robotron" or just the governmental emblems of the VEB for Volkseigene Betriebe (People-Owned Enterprises). The AIF was largely in charge of this process of nationalisation and collectivisation in line with party expectations.

3.1.8.2 Material Identity

Another aspect of GDR design policy was the absolute anonymity of designers and brand names. In line with the Marxist rejection of commodity fetishism, little to no incentive was given for brand-marking. This is also observed in other socialist countries in Europe. Brands and names of products underwent a strict collectivisation and form-giving achievements in the industrial design process were made anonymous. In the 1970s the economy of the GDR was restructured by the conglomeration of socialist enterprises (*Volkseigene Kombinate*, which stands for people-owned companies). Companies whose name stood for quality and tradition were entirely nationalised and incorporated into the governmental socialist *Kombinate*, thereby erasing their corporate identity and their trademarks. Furthermore, in the 1970s there was a de-facto advertisement ban for ideological reasons to save business expenditures, and also due to the fact that most advertised products were simply not available. Party congresses usually discussed the shortage of consumption goods.

In Western countries fashion is highly valued. Graphic and industrial designers are celebrated by the media; they are socially recognized and supported by publicity, business and industry. In contrast, East German designers remained largely unknown. In spite of the high quality of their products and designs, the 2,500 educated industrial designers from GDR-schools remained anonymous.

Wolfgang Dyroff, for example, designed objects of everyday use which were produced in millions in Eastern Germany such as the drill “Multimax”, kitchen utensils such as the “Mixette”, windows, doors and furniture hardware, vacuum cleaners, and so forth. Dyroff remained unknown publicly for decades. He received the prize of “Gute Form”, an award that was given out annually from 1958 to 1963 by the Ministry of Culture (Höhne, 2008).

In order to increase sales and profit, many export-bound East German products were not labelled “Made in the GDR”. Products such as “Bruhns”, “Electronics”, “Privileg”, and “Hanseatic” kept their brand names, but avoided identification with the political system they originated from. Internal and external recognition of East German design, therefore, was made impossible.

3.1.9 The legacy of East German Design

What was left of East German design after the fall of the Berlin Wall in 1989? Considering the relative lack of consumers’ choices the long-awaited opening to the West was welcomed by the majority of East Germans. Eyewitnesses describe these historic events: “West German furniture deliveries, car and hardware stores, department stores, and supermarkets were sprouting out of the ground like mushrooms; they were booming. Endless convoys of trucks rolled over the worn and pot-holed GDR-roads into the most remote corners of the country. Even East-butter, East-milk, East-bread, East-vegetables and generally all the GDR-stuff was no longer desired. Away with it; and bring on the colourful delights of the golden West!”[13] The East German population did not resist much. Any sort of identification or personal relation with brands had been “systematically” trained off on the producer and on the consumer side.

The AIF was closed down in 1990, as were most East German industries, even those which could have been competitive on the common and international market (Höhne,

[13] Translated from the German original in “Entworfen – Verworfen” (Article in Der Spiegel online) by the Author.

2008). After the fall of the Berlin Wall, a trust corporation was in charge of finalising the state-owned economic sectors of East Germany; this meant the privatisation and the closing down of potentially competitive businesses. One example is *Wittenberg an der Elbe* in north-western East Germany which was an exemplary business with approximately 3,000 employees of which over 90 percent were qualified women. In 1989 the factory produced 400,000 electronic sewing machines of the model ”Veritas”, i.e. 11,000 pieces daily. The majority of these were intended for export into socialist and capitalist countries. Orders had been placed fully till 1993 but in 1991 the factory was closed down and within a short time span it became industrial wasteland.

A second example of the closing down of a competitive business was the *VEB Zwönitz* in the south-west of Eastern Germany, which was known for its development of technologically up-to-date medical-electronics. In the mid-1980s, for example, a mobile dialysis unit was designed and produced in *Zwönitz*. The so-called Artificial Kidney KN 501 was produced without know-how or materials from the West. It was cheaper, easier to handle and to maintain, and more patient-friendly than any competing Western apparatus (Höhne, 2008). Production was inhibited in 1990 and the *VEB Zwönitz* was divided and privatised.

There are other examples of the unification of eastern and Western competences in production and design:

The *VEB Lokomotivbau- Elektrotechnische Werke Hennigsdorf*, near Berlin, exported goods to China between 1949 and 1991. Over 3,350 passenger and freight wagons were sent to the People’s Republic of China in these decades. In the 1980s this company began to cooperate with the West German enterprises *AEG* and *Siemens*. After the Fall of the Berlin Wall it was taken over, first, by the AEG, then, by ADtranz and, later, by Bombardier Transportation; but each time maintaining the entire original staff in charge of product design. The same factory produced the new Metro wagons for Shanghai and Hong Kong in the 1990s.

Nevertheless, this type of development was the rare exception, and the de-industrialisation of East Germany caused high rates of unemployment among

workers and among designers. The established designer's former experience of working with limited resources in an environment characterised by all kind of resistance such as embargoes from the West, shortages, and ideological constraints, were no longer required in the new capitalist system, even if they had been successful in designing objects that were functional, durable, affordable and aesthetic in the sense of modern design theory from the West. West Germany had already an abundance of designers that were well adapted to the capitalist system. Furthermore, the criteria for design were different ones due to the saturated Western markets (Johnson, 2002: 15).

The ideological character of design can be observed by the way GDR design was handled by the West, after the fall of the iron curtain. The book "SED. Schönes Einheitsdesign"[14] by the *Taschenbuchverlag* portrays GDR design as one of bad taste; and the millennial publication "Design-Lexikon Deutschland" entirely eclipses GDR-design ignoring its sheer existence. Apart from these negative examples, all that remains from East German design is the retrospect construction of an identity that did not exist at that time, through the memories of objects that had been rejected originally, and which are revived now in the context of the *Ostalgie-fashion*.

3.1.10 Distancing from National Socialism

Part of the ideological aspect of East German design also manifests itself in its conscious distancing from National Socialist design, which is extensively discussed by Walter Benjamin. Benjamin describes how the Third Reich was the first system in Europe to promote a holistic aesthetisation of the political in order to mobilise the Masses. As a contrast, he saw the necessity for the politicisation of the aesthetical (see: Benjamin, 1963). This discussion illustrates the inter-relatedness of the form of objects and political ideologies.

[14] This is meant to be a humorous pun, interpreting the acronym of the Sozialistische Einheitspartei Deutschlands – SED (Socialist Unity Party of Germany) to "pretty uniform design".

One of the first industrially mass-produced goods of value in East Germany was the typewriter “Optima” in 1946/47. The company in charge of its production told the designer Horst Michel: “We no longer want to produce the old Nazi-typewriter “Olympia” on which the fascist *Schreibtischtäter* [armchair strategists] wrote their criminal, racist, war-driving deportation and assassination orders. Make us a new machine, a humanist, harmonically designed one, that embodies the new democratic and optimistic mind of Germany – an Optima” (Höhne, 2008). The effort within the GDR to reconcile with the past and to come to terms with its National Socialist history is an issue that deserves to be studied in detail; but for the aim of this study it serves as an example of how the appearance of an object is connotated with an ideology and with historic events, namely the holocaust.

A similar example is the *Volksempfänger*, a radio that was designed to be cheap in its production and thus available for everyone; it was sturdy and easy to repair. The *Volksempfänger* was designed in 1928 by Walter Kersting and has been qualified as the “most important instrument of fascist media politics” (Petsch, 1987: cited in Schneider, 2005: 88). The message of what was broadcasted was not under control of the designer. Nevertheless, this unique type of radio is heavily associated with the Nazi regime. Both examples illustrate the importance of material culture for the communication of political ideologies. Objects can be designed without cultural and political content but can be employed in such ways. The power of the connotations made with form and the informative content of form, is demonstrated by these examples.

3.1.11 Competition and Innovation

The GDR government had full power over the supply side, but decisions were constrained by the resource shortages. Consequentially, the centrally-planned economy provoked shortages and surpluses at the same time. The production was not guided by competition between different enterprises or by consumer demand, but by the targets set by the state for an aggregate output (Kornai, 1992: 271). Yeager

(1999: 72) claims that these forms of socialist economy are static and "(…) by their very nature, do not promote competition."

Stiglitz (1994: 109-138), however, emphasises the different meanings of 'competition'. Sleifer outlines the related discussion about competition in communist regimes: "[T]here was a fierce competition between individual enterprises competing with each other for resources. Investment goods and different inputs necessary for production were allocated administratively and were scarce. Therefore state-owned enterprises had to compete with each other, most often in the process of multilateral bargaining, to force central planners to give them as much as possible (and demand as little as possible)" (Sleifer, 2006: 20, see also Jasinski & Ross, (1999): 195-196). According to Sleifer's view, competition under socialist realism was not efficient in the capitalist sense of the word, but rather destructive. It is one example of a different type of economic competition in a non-Western system.

As chapter 3.1.6 illustrated, innovation in East Germany was spurred on more by the environment of scarcity than competition within the industries. Scarcity promoted longevity and quality as product ideals. At the same time the schizophrenic competition with Western consumerism promoted a Western idea of modernity, imitating and adapting not just technology and production method but also form and style, which was also a form of competition that encouraged innovation within East Germany.

3.1.12 Environment

There were no specific environmental policies related to design in the GDR. On the contrary, ecology was seen as an obstacle for economic growth by the SED. Exploitation of brown coal had to be increased in the 1970s due to the global increase in the prices of oil, resulting in high emissions of sulphur dioxide. Intensive use of chemicals in the industry led to the pollution of rivers and landscapes. Additionally, since 1975 East Germany stored toxic waste from West Germany in

exchange for a total of 1.2 Billion DM[15] of which only 40 million DM were invested into environmental protection in return (Wolfrum, 2008: 74).

3.1.13 Conclusions: East Germany

The increase of industrially designed goods in East Germany was substantially less in sheer number of products and variation than in Western countries. The SED was ultimately in control of industrial design in all aspects of production, form-giving, distribution and consumption. Keeping up with Western consumption culture turned out to be the political and economic imperative. The government changed the organisational structure of the economic system to the extent that it could maintain control over the quantity and the type of its products, as well as its cost, and the form of its distribution. Although it promoted a "socialist product culture" in theory, it did not invest in innovative technologies, structures or systems of production that would actively contribute to a new form of product culture. The government's actions were limited mainly to controlling aesthetics and resource allocation, as well as interventions in distribution.

This represented a top-down attempt to realise Marxist-Leninist theory in practice. The social revolution in a Marxist sense did not occur; the SED simply replaced the bourgeois class as owners of the means of production. Their goals were, in part, different as I have outlined above. But economic pressures directed production towards surplus value creation through the export of goods. East Germany was not able to sustain itself alone and so it had to align itself with its capitalist neighbours. This resulted in changes in its system of production, which was separated into two spheres in order to earn foreign currency to import necessary resources. In summary, East Germany was stimulating economic growth through the exploitation of labour in the same way as it occurs in capitalist systems. The GDR depended on foreign currency to supply its population with basic necessities, always under pressure to modernise society in order to legitimise its existence. Development was in other

[15] DM stands for *Deutsche Mark*, the German currency.

words, seen as a certain degree of material welfare in both East and West Germany. The notion of what a product culture should look like differed mostly in theory, in reality it differed mainly in the lack of consumer choice in East Germany.

On a cultural level, the SED's economic policy harmed itself by minimising any identification with nationally produced goods, which probably led to sentiments of inferiority in relation with other nations. Any other intent of public policy which aimed at building up national pride was undermined by this approach. At the same time, the scarcity of goods encouraged a culture of thriftiness and creativity in problem-solving. The availability of household items was advertised as a contribution towards the liberation of women by saving time through the technical advances of washing machines and so on. The design had to appeal aesthetically and to convince through easy usage, reparability, and durability, which were seen as signs of quality.

In summary, one can say that East German policy failed in developing a unique consumer culture. Designers attempted to create an individual style under resource scarcity, economic pressures and ideological guidance, but the structure of the economy remained largely dominated by capitalist characteristics. The disparity between the state's, and the population's definition of "needs" and "desires" was never resolved, and, therefore, could not be translated into a material culture that coincided with both economic realities and ideological aims. East German designers achieved to design goods that could potentially be sustainable regarding their quality and longevity, but the surrounding framework of production and distribution systems did not correspond with them.

3.2 India

India is the second case study. It has a distinct national design policy since the years following its independence. Meanwhile, its concept of design is a firm part of the national development strategy. In India design is not only associated with glossy magazines - old artisanery and craftsmanship are also valued as a form of design. They are even taken into consideration for industrial designs. India is an emerging

economy that is still facing many development problems, it is also extremely diverse in ethnic and religious groups, rural and urban spaces, as well as geographically and culturally different landscapes. Socially it is still divided by its caste system and is momentarily experiencing the development of an urban middle class, which results in greater social discrepancy and conflictive tensions. Additionally, population growth is increasing. The following chapter tries to locate design in the developmental dynamics of India by analysing literature on the subject and the visible effects of design policy.

3.2.1 Perception in UK and reciprocal dynamics

India's development from the 16th century onwards cannot be viewed in isolation from the influence of European powers which established trading posts and colonies in the subcontinent. The concept of "intertwined history," as introduced by Edward Said (1993), describes the cultural exchanges between the imperial England and its colony and their mutual influences. The influence of the contact with India can be observed in the midst of the industrial revolution in England.

Indian design first came to public discussion in England around 1851. There are several literary accounts which describe the experience of "The Great Exhibition" in the Crystal Palace. One of these was written by the art critic Ralph Wornum, who hoped the exhibition to be a 'lesson in taste'. Foreign displays should "advance national taste and contribute to the general elevation of the social standard," (Mathur, 2007: 17) and Wornum was not far off with his expectations:

> "The Exhibition of the Works of Industry of all Nations in 1851 was barely opened to the public ere attention was directed to the gorgeous contributions of India. Amid the general disorder everywhere apparent in the application of Art to manufactures, the presence of so much unity of design, so much skill and judgement in its application, with so much of elegance and refinement in the execution as was observable in all the works, not only of India, but of all the other Mohammedan contributing

> countries, - Tunis, Egypt, and Turkey, - excited a degree of attention from artists, manufacturers, and the public, which has not been without fruits." (Gorman, 2003: 20)

In comparison to the rich traditionally crafted products from Asian and African countries, European nation's industrial contributions had no common principles. They drew on ornamental decoration from all historical epochs without a holistic culturally integrated character. In the course of industrialisation a serious decline of craftsmanship occurred and the quality of manufactured products suffered in consequence (Mitter, 1992: 222).

Greek heritage of form and style was considered by British critics to be unquestionably superior in comparison with Indian commodities; but pashmina-shawls from Kashmir and Lahore were recognised as of far better quality and aesthetically more appealing than anything Europe had produced. "At the great Exhibition, (…) the manufactures of what had previously been regarded as vulgar and degraded culture became assimilated into a Victorian aesthetic of refinement, skill, delicacy, and good taste," (Mathur, 2007: 17).

Influential thinkers of the 19th century wrote books on this topic such as Willam Morris, John Ruskin with "Modern Painters" (vol. III, 1856) or Owen Jones' who wrote the manifesto of this aesthetic movement "The Grammar of Ornament" (1856). Their works criticised the Victorian society, striving to improve it through "a close examination of Indian and other Eastern designs and their guiding principles" (Mitter, 1992: 230-249).

This new school of designers were the pioneers of modernism, which created a new opinion on industrial design in Victorian Britain: "Not only was the eclectic use of different styles of design in industrial products generally rejected but, more important still, illusionist design in particular was condemned. In rejecting traditional design the reformers had to look for alternative conventions and in the process they came to recognize the importance of Indian decorative arts" (Mitter, 1992: 230). Indian design thus directly influenced industrial design in the West, which in turn again influenced Indian production.

3.2.2 Consequences of Interchange

Because of the progressing industrialisation Britain was facing social upheaval and a kind of cultural identity crisis. The contemporary of Morris, John Stuart Mill, described the economic relations of Great Britain and India by comparing it to that of other colonies:

“Our West Indian colonies, for example, cannot be regarded as countries with a productive capital of their own…(but are rather)…the place where England finds it convenient to carry on the production of sugar, coffee and a few other tropical commodities. All the capital employed is English capital; almost all the industry is carried on for English uses; there is little production of anything except for staple commodities, and these are sent to England, not to be exchanged for things exported to the colony and consumed by its inhabitants, but to be sold in England for the benefit of the proprietors there.” (Mill, 1848: Book III, Ch. XXV). This asymmetrical relationship of exploitation is all the more interesting when considering the fact that this was not just happening on economic and political levels, but also on a cultural level.

Nevertheless, the acknowledgement of Indian forms of decoration and design did not necessarily result in a different relation with the Indians. Morris addressed this contradiction: “[W]hile European designers looked up to Indian craftsmen for inspiration in their design, the very same people were being deprived of their means of existence by the Indian government” (Mitter, 1992: 250). Furthermore:

> “It is a grievous result of the sickness of civilization that this art is fast disappearing before the advance of Western conquest and commerce – fast and every day faster. While we are met here in Birmingham to further the spread of education in art, Englishmen in India are, in their short-sightedness, actively destroying the very sources of that education – jewellery, metal-work, pottery, calico-printing, brocade-weaving. Carpet-making – all the famous and historical arts of the great peninsula has been for so long treated as matters of no importance, to be

> thrust aside for the advantage of any paltry so-called commerce." (Cole, 1948: 24)

Imposing the same processes and structures of production upon the Indians, led Morris to hold Great Britain directly responsible for the deterioration of Indian culture because of the promotion of inferior goods. Criteria for products were reduced to their cost. The functions of Indian objects were diminuated making them to museum objects that are interesting to observe but not much more (Mitter, 1992: 251). Increasingly, dependency on imported manufactured goods from Great Britain was induced. Indian crafts were transformed into what nowadays often is referred to as *kitsch,* the classic craft that is usually offered to tourists as relics of a past identity that has been commodified (Schneider, 2005: 229-234).

This admittedly extensive discussion of a discourse on industrial design in Victorian England has the purpose of showing the interrelation of different cultures even in its product culture. Of course, the flow of ideas and artefacts was not unidirectional and so, the Indian continent was also influenced by the British colonisation:

"The paisley or *buta*, for instance, is not just the enchanting motif described in the oversized coffee-table books about the romantic textiles of the Indian subcontinent. The pattern also bears the imprint of the colonial economy, the stamp of Victorian industrial consumption, and the reshaping of ideas about India at the point of the interpellation into Western economies of desire" (Mathur, 2007: 5). India was not just politically and economically absorbed as a British colony, but also cultural consumer behaviour and desires were adapted.

The discussion above also points towards the outline of a cultural crisis that occurred as Europe grappled with the challenge of finding a new product- or new form-identity as its production structures changed radically through industrialisation. This is a process many developing countries are going through in even more radical paces today under the development strategy of industrialisation. One such example is India itself.

3.2.3 Political Economy

Great Britain had exploited the Indian sub-continent, its people and its resources. Nevertheless, the potential of its remnants for India's further development in regard to the rule of law, private property, free press, religious freedom, individual liberties, and a respect for education – even if elitist in structure - was enormous (Nobrega, 2008: xiv). The original goals of India's development strategy were ending poverty, ignorance and disease as well as inequality of opportunity, as exclaimed by India's first Prime Minister Pandit Jawaharlal Nehru after the country's independence from British rule in August 1947 (Nehru, 1947 cited in: Roy & Chatterjee, 2006: 40). Industrialisation, import substitution and protectionism were seen as means towards self-sufficiency and modernisation. In the course of the next decades, India followed an inwards-oriented model of development. This sort of industrialisation included a series of tariffs and trade barriers in order to protect the young national industries in their early stages against foreign competition.

Industrialisation was intended to be the basis for self-sufficiency, and finally lead to poverty-alleviation. Soon after independence, a centrally-planned economy was established with the Industries Development and Regulation Act (IDRA) of 1951. Similar to East Germany, priority was given to the heavy industry at first, based on the Soviet model of industrialisation (Basu & Patnaik, 1995).

Governmental intervention in India focused on key industries. Chemicals, electricity, steel, transport, insurance, parts of coal and textile industries, and banks were nationalised at different moments. High tariffs restricted imports in these sectors. Additionally, nationalised firms were subsidised and investment funds were directed towards selected industries while land use and prices were largely regulated by the state.

Under Prime Minister Indhira Gandhi's rule (1966-77), India experienced two distinct changes. First, agricultural policy changed in the context of the green revolution. New seeds and fertilisers were subsidised, agricultural credit was made available, and rural electrification was supported by the government. As a result of these efforts,

India achieved self-sufficiency in grain.[16] Secondly, the state increased the regulation of the economy through the nationalisation of banks, restrictions on trade, price controls, and by constricting foreign investment.

In more detail, the Foreign Exchange Act (FERA) of 1973, in effect, hindered the import of new technologies throughout the 1970s and 1980s through the regulation of trade and foreign investment. The Indian state planning system was extensive and reached into basic business decisions such as pricing, distribution, investment, capacity utilisation, and lending. However, the historical dependency on Britain for basic manufactured goods was left behind (Stearns, 1993: 213).

In the following years the targets and objectives of this strategy of modernisation were not achieved and criticism grew as a result. The inwards-oriented strategy itself was subject to criticism. In the early 1980s, small steps towards deregulation were initiated. Economic reforms aimed at a mild liberalisation of trade, industrial policies, and financial policies. Conjointly with tax concessions, subsidies, and the depreciation of the Indian Rupee, export performance improved provoking the GDP to grow over 5 percent/year during the 1980s. In comparison, the 1970s were marked by an average growth rate of 3.5 percent. Protectionism remained strong however, representing some of the world's highest tariffs and extensive quantitative restrictions. Government control was also maintained in the financial sector with a high degree of public enterprises, a growing system of subsidies, and a series of anti-poverty and rural employment schemes.

In the years after, increasing public expenditure led to a macroeconomic crisis that was countered with more pervasive economic reform. Throughout the 1990s India borrowed structural adjustment loans (SAL) from the World Bank, and was subject to complementary structural adjustment programmes (SAPs) by the IMF. These encompassed loans coupled to macroeconomic reforms that were implemented rapidly especially before 1995. Reforms included the devaluation of the rupee, the liberalisation of trade policies, the strengthening of capital markets and institutions,

[16] On the problematics of the Green Revolution – see Vandana Shiva, 1992. Shiva illustrates how the employment of the new seeds caused new dependencies and social and environmental problems.

the removing of complex licensing systems for industry and imports, and the improvement of tax administration, as well as the general liberalisation of the financial sector (www.worldbank.org - Country Overview India). These reforms, particularly liberalising trade, have led to a great influx of foreign goods but also foreign capital. This increase in international economic activity and competition of national Indian products with foreign goods reminds of the dependency on British imports during colonisation. Design, as a factor of differentiation, cultural identity and value-addition, gains in importance for Indian industries in this new economic framework.

3.2.4 Gandhi & Nehru

Politically, the importance of design was recognised relatively early in India it being on the agenda even before independence. Under Mohandas Karamchand Gandhi a village-centred model of self-sufficiency was followed rather than the US-promoted approach to development, or the communist model of the SU. Gandhi envisioned an India of crafts and agriculture (Stearns, 1993: 213). In the 1920s, he began campaigning for independence through peaceful resistance. Gandhi's symbolic use of artefacts in the promotion of socio-political changes in India was part of his complex political strategy (Balaram, 1996: 129). This is one reason for the importance of traditional forms of design in India's development strategies:

"Self-reliant systems of design and production were inherent in Gandhi's mission. They were directed at serving basic needs through a demonstration of social justice and a respect for nature's balance. Symbolic of this quest was Gandhi's campaign for the boycott of British textiles, and for the home production of hand spun, hand-woven "khadi," the livery of freedom which was to evolve into a handloom revolution that is in itself India's greatest achievement in contemporary design" (Chatterjee, 2005: 4). The focus on rural India is expressed in the choice of objects Gandhi used in his campaigns.

Together with Jawaharlal Nehru, India's first prime minister and co-founder of the G77, or Non-Aligned Movement, Gandhi's aims were translated into national policy

after independence. Policy under Nehru was socialist in essence, though. Nehru, also nicknamed the 'License Raj' for the extensive system of bureaucratic structures developed under him, created the basis of a government-driven industrialisation, loaded with bureaucracy and resulting in slow economic growth. Bureaucracy "stifled innovation and the entrepreneurial spirit and kept hundreds of millions of Indians in a state of abject poverty. At (its) height (…) the 'license regime' required permits for just about anything, until the licenses became more important than the underlying products or services that they permitted" (Nobrega, 2008: xv). In this bureaucratic complex, design was still pursued as strategy by the government though. As a whole, India then realised a unique development strategy, which was as independent as possible in the context of the Cold War. This strategy was based on a fusion of Ghandi's emphasis on self-reliance and Nehru's implementation of import substitution, design playing not just a supportive role in this process, but one that was intentionally integrated. The material aspect was stressed in both strategies, one of the reasons being the specific Indian material culture.

3.2.5 Mythology and Symbolism in Indian Material Culture

The specific case of India illustrates how different a material culture can be. It is based on mythology and symbolism:

> "Mythology and symbolism have always played and do still play important roles in Indian life. Many Indians see their own culture as basically non-materialist and reliant more on spiritual than on physical values. Indians also like to distinguish their own approach, which gives preference to feelings, emotions, and inexplicable inner convictions, from the Western approach, which is predominantly analytical, intellectual, and logical (....) Most Indians do not question the outer form of a god with a thousand arms, four heads, an elephant head, or both male and female features. In the Indian context, the inner meaning behind an outer form is most important. This apparent neglect of

> realism in India has ancient roots and permeates much of contemporary culture. It can be recognized in virtually all art forms" (Balaram,1995 : 127).

Subramanian emphasises that "[t]he mythology-filled Indian mind reduces everything to symbols of enormous tolerance and elasticity which persist through successive changes in religious ideas, magically transforming themselves becoming large in content and expansive." (Subramanian, 1978: 127)

Balaram additionally states that "the mythology of a culture (…) generates artistic expressions and political discourse, including industrial forms which in turn reinterpret and materially support the psychological reality in which these mythological forms exist; and that an understanding of these symbolic relationships can in fundamental ways aid the design for contemporary needs" (Balaram,1995 :128).

The quintessence of these observations is that the content of objects is immaterial, what counts is its significance. The cultural, ideological, historical, symbolical or mythological information inscribed in the material, varies not only from object to object, but is also perceived differently by the users.

Gandhi instrumentalised the symbolism of simple tools and ordinary clothes and community development to transmit his message in a largely agricultural nation. The majority of the Indian population was illiterate but with this strategy Ghandi could reach everyone on a much deeper intuitive and emotional level. The strategy had its origins in ancient Indian mythology that is at the core of Indian culture. (Balaram, 1995:133) By associating himself with symbolic objects, Gandhi made it possible for millions of Indians to identify themselves with him, and thus with the Indian nation. Gandhi was an advocate of mass production by the masses (Balaram, 2000: 609). He did not promote the unreflected import of Western technologies and widespread industrialisation.

Pursuing his independent development path, Gandhi considered artefacts to be tools and symbols at the same time. Tools, for example guns, may not be accessible nor affordable to everyone, but ordinary objects such as Khadi cloth or a spinning wheel are. While guns require training and experience, the things selected by Ghandi are

already in use by the majority of the population. The products and their uses that Ghandi chose to convey his message with were ones that are available and known to nearly everyone. This strategy made it possible for everyone to partake in the movement to the degree of their possibilities in skill, education and resources. Ghandi fought for his cause by moving the Indian population not by the means of guns and violence, put by disarming the colonial regime with the power of symbolism (Balaram, 1995: 136).

For development strategies the manoeuvrability of this phenomenon of material symbolism to pursue ideological goals, is of relevance. If a development strategy is to be holistic, the material component of it has to be taken into consideration. The Indian example illustrates this:

“His deep involvement in the subject made Gandhi *one with it.* This is again found in Indian mythology, which insists on a special relationship between the actor and action. In many ancient rituals, persons conducting them become possessed and therefore indistinguishable from the act performed by them” (Balaram, 1995: 137). Gandhi was an exception in world history and he utilised the specific identity of India for his strategy. No universal conclusions can be drawn from this as different cultures have completely different approaches to the material world. What can be concluded though is that there is potential for steering development that can be found in tapping this aspect of product culture.

3.2.6 Government Design Policy

Since its independence, India considered design in its policies. It began its industrialisation that was based on the Western model but was politically independent. Due to India’s difference in magnitude and nature, the process of industrialisation turned out to be very different (Balaram, 2000: 58).

In 1958, the Government of India under Prime Minister Nehru invited the designers Charles and Ray Eames to give recommendations for the formulation of a national design policy. Combined with the Gandhian heritage of craft, self-reliance and

sustainability the so-called “India Report” also called “Eames Report” from 1958 founded the basis of a national design policy that should resist a rapid deterioration of consumer goods within the country that may come with developing an own industry.

3.2.6.1 The Eames Report

The India or Eames Report was written by the two professional designers Charles and Ray Eames after a three-month journey through the country. It begins with an excerpt from the *Bhagavad-Gita*, a Hindu scripture, as a symbol for their effort to embed the results of their studies in the country’s tradition.

As a starting point, they emphasise the dramatic acceleration in change which India is facing, and the need to identify values and qualities which represent the standard of living. The report suggests to invest into environmental protection, shelter, services and objects of every day use, and to explore the evolving symbols of India.

The report emphasises India’s tradition and the familiarity of its philosophy with the meaning of “creative destruction” alluding to Schumpeter’s (1961) concept of the same name, which suggests that progress is only possible through the periodic destruction of some things of the past. At the same time the Report condemns “caprice” and instead promotes research on the basic needs of India’s population. It is, according to the Report, this combination of the “inevitable destruction of many cultural values” and “the immediate need of the nation to feed and shelter itself” that require qualitatively new designs. Quality of products is highlighted several times as crucial for the further development of the country.

The Eames also warn of too much creativity in the designs. They conclude that quality is more important for design in India at this stage than creative experiments.

Furthermore, they promote transdisciplinarity in their report. The underline the importance of bringing together traditional disciplines such as engineering, philosophy, economics, architecture, etc. to formulate questions in a new way that

will lead to fresh answers. They conclude with a specific suggestion, which is the foundation of an institute with a multidisciplinary Board of Governors. In response, the National Institute of Design India was founded by the government in 1961.

3.2.6.2 The National Institute of Design of India

The National Institute of Design of India (NID) was the first attempt by a developing country to institutionalise the discipline of design for "national regeneration" (www.nid.edu) as part of a holistic development strategy. The Eames Report, a guideline for the newly founded NID, together with the new institute declared that: "In the face of the inevitable destruction of many cultural values … the new Republic is to survive" (Chatterjee, 2005: 5).

In the post-war design culture India was exemplary in trying to translate the symbiotic relationships of tradition and modernity in its product culture through design in such a way as that it might benefit human development (Bonsiepe, 1991: 284). Through the institutionalisation of design policy in the NID, the awareness of the importance and value of combining industrial and traditional forms was increased: "The Indian designer has to synthesize the highly decorative Indian cultural aesthetic on the one hand and the formalized idiom of the industrial international style, which modern business demands and to which contemporary living aspires on the other hand. The designer as agent of change plays a central role in India's struggle to preserve its identity in the process of its modernization" (Balaram, 2000: 59). This awareness remains strong in Indian product culture until today as can be seen in the frequent activities of the NID and other Indian design institutes.

The NID often hosts international design conferences with renowned designers from across the globe. It does, however, focus more on innovation in designs for private industry than it did before India's economic opening in the 1980s.

3.2.6.3 Recent Design Policy

In more recent efforts to strengthen its international competitiveness, India more decisively steered away from its traditional industries towards information technologies. “Gandhi’s vision of an India devoted to traditional crafts while avoiding Western-style consumerism in favour of spiritualist and nationalist goals have clearly receded” (Stearns, 2001: 129). The demand for creativity has also increased, given the strong competition on the global market and the rising purchasing power among certain sectors of the population (IDW, 2007). In support of this, a new Indian Design Policy was set up by the Ministry of Commerce and Industry in 2007.

The policy document highlights the importance of design for innovation, competition, technological advance, and sets out to establish India as the new “hub” of global design quality. Traditional knowledge should serve as a source of inspiration for the development of sustainable, ergonomic and aesthetic design solutions. Design is furthermore encouraged as a means to support small and medium enterprises in establishing themselves on the market. Among other points, the policy paper suggests the establishment of a number of design centres, international exchanges and subsidies for design projects to encourage growth. Economic reasoning has taken over the cultural reasoning in design policy. In the earlier years, governmental design policy was perceived much more as an instrument to maintain and build up cultural values and national identity, whereas recently it has become and instrument for stimulating economic growth.

3.2.7 Industry since Liberalisation

Since the liberalisation programmes of the 1990s, “international collaboration became common for most Indian industries. (…) Many Indian collaborations import designs, drawings, technology, even mould “lock, stock, and barrel”. It is perhaps appropriate to call these developments “labourations” – because they are chiefly the exploitation of cheap labour available in the country – rather than “collaborations”,

and to characterize the activity as “reproduction” rather than “production” by the Indian industry” (Balaram, 2000: 59-60).

The Indian private sector was indeed expanded in the course of the restructuring programmes. Exposed to international competition, government policy was loosened to allow the merging of companies and joint ventures. Procter & Gamble, for example, merged its operations with the Indian Godrej Soaps. There is a common perception that India’s economy is built on information technology and business process outsourcing, contrary to this opinion, Nobrega (2008: 6) states that this is rapidly changing. National and multinational firms intend to meet the demands of a rapidly growing middle class. In turn, there are an increasing number of young people that benefit from the millions of skilled and semi-skilled jobs that the Indian manufacturing sector is creating.

The inheritance of design policy can be seen in the strength of its remaining national and semi-national industries. The public limited mobile phones company founded by Sunil Mittal, for example, had more than 20 million customers by 2006. In the same year, it had a market value of more than US$30 billion; and the annual growth rate was over 80 percent (Nobrega, 2008: 13). The Indian design industry is one of the most promising ones, and cooperation with Indian enterprises is highly desired by transnational companies. In 2007, the Finnish company Nokia, for example, planned to cooperate with the Srishti School of Art and Technology in Bangalore. It hoped to cooperate with young designers in order to develop ideas for mobile phones for the Indian and international markets (IDW, 2007). Further international design cooperation takes place in the automobile industry:

“Fiat Auto and Tata Motors recently announced the formation of a joint venture to produce passenger cars and diesel engines at a new facility here for India’s fast-growing auto market. (…) With the capacity to produce in excess of 100,000 cars and 200,000 engines and transmission annually, the Ranjangaon plant will manufacture vehicles for both the Indian and the overseas markets” (Nobrega, 2008: 17).

In the same year, the French automobile manufacturer Renault opened its first design department in Mumbai in order to work on the model “Logan” which will be

produced in India (IDW, 2007). The cooperation of national and multinational companies in design allows India to regain a certain degree of ownership in the production process, apart from the labour intensive and unskilled jobs. The early implementation of design policy and the possibility for the vehicle industry to develop under protectionism of the 1970s still were not sufficient measures to ensure the competitiveness of Indian manufacturers on an open market (IDW, 2007).

Socially these developments are expressing themselves by increasing disparities, accompanied by criticism of these developmental strategies: “[U]nfortunately, the unquestioned following of Western technology is polarizing Indian society into two divisions: on one side is a small group, the rich, conspicuously consuming, aggressive, politically powerful, urban elite; and on the other side is a huge group that is poor, rural, powerless. The poor, lacking employment and purchasing power, are left out of the circle of production and consumption. Add to the situation a constant bombardment of consumption-promoting advertisements in all media, and a potential explosion can be predicted” (Balaram, 2000: 60).

There are, then, at least two faces of development in India. One is pointed out by Balaram as the sectors of the population which are being marginalised and pushed into further poverty and dependency, and which are suffering from acculturation under Western hegemony. The other face of development is the rapidly-expanding urban economy in relation with international enterprises and foreign direct investment, which leads to the growth of a middle class that is adopting a Western model of consumption and production. Indian designers, of course, are among those who might benefit from this development, as the examples of Nokia, or Renault illustrate, but data and hard facts on the actual design processes are not available. The difficulty in making secure estimations from these developments on the role of design is in the lack of available data and information on the actual design processes; who is involved? Where does the design process take place? Who makes the final decisions? And so forth.

3.2.8 Consumerism

The market potential of India is huge considering its population of nearly one billion. Predictions by the Associated Chambers of Commerce and Industry claim that the per-capita income in rural areas will increase because of the government's focus on their industrialisation and on the improvement of rural infrastructure. This will result in a growth of consumption, particularly in manufactured goods other than food and beverages (AssoCham, 2009). This will result in an increasing demand for designers which may either design new goods for this mass markets, or adopt imported ones for Indian consumers. It is estimated that approximately 10 000 designers/year are required as a consequence of the economy's average annual growth of about 9 percent. In 2007, there were only an estimated 5000-6000 designers - who were mainly employed in the design-intensive communication and manufacturing industries (IDW, 2007).

The share of consumption of the poorest 20 percent of Indian population is only 3.6 percent, whereas the richest 20 percent consume about 45.3 percent of all goods and services (HDR, 2007/08). These numbers reflect the huge inequalities that characterise India, but they show also a tendency of elites towards mass consumption. Mass consumption exists mostly in urban areas, and despite government investments into rural areas, the rural are deprived of their income and suffering from poverty. Muhammad Yunus approached rural poverty through a micro-financing model, for which he won the Nobel Peace Prize. He supports local development by providing small loans, which are used particularly by women to open retail stores. Demand is restricted to basic goods, but still offers enormous market potential for international companies. In 2005, Indians were collectively spending over US$375 billion on personal consumption every year. With the average Indian worker's wages growing by 14 percent annually, Indians were purchasing goods in massive numbers (PIB, 2008).

Kunibert Raffer describes how consumer behaviour is influenced in developing countries. He states that the periphery adopts the needs and wants according to the structures of needs and wants of the center (Raffer, 2001: 7). Consumer ideals are formed outside, and the Western patterns of consumption are imposed upon these

rural cultures through media, education and social structures (Raffer, 2001: 18). India, as a former British colony, underwent this process of assimilation in different forms. One example is the educational system, which was formed by the British colonial administration. The adaptation of Western culture is still, to a large degree, an elitist phenomenon, practised mostly by the dominant economic classes. As representatives of these dominant classes, designers are affected by this phenomenon and act as promoters of Western lifestyles, rather than engaging in the empowerment of local and traditional culture:

> "[J]ust 18 percent of India's 21,000 publications are in English, but they account for more than half of all the money spent on printed advertising. Industrial goods, private cards, office furniture, and anything to do with slightly sophisticated technology is advertised only in English. The reason is because the top 10 percent of the professional and modern business sector alone constitute the market and this affluent intelligentsia is English educated. Anyway, most advertisement designers and copywriters would be too completely divorced from the native Indian sector to be able to produce a decent advertisement in any of the vernacular languages. The recruiting policies of advertising firms only accentuates this phenomenon, as their copywriters are mainly drawn from the English speaking sectors, who can spot the international trends" (Margolin, 1996: 195)

India is facing the challenge of defining its own cultural values in material forms under the economic and cultural dominance of Western modernity. Indian designers can contribute to this aim, government policy in the design sector aims to support them in this endeavour but economic pressures from increased liberalising measures make this more difficult.

3.2.9 Culture

Lee Kwan Yew, Singapore's Prime Minister, expressed his apprehension of the need to find an appropriate cultural model, taking certain losses into account, before "Singaporeans would become the flotsam and jetsam of Western mass culture floating on Asian waters" (Margolin, 1996: 195). The economic and cultural differences between Asia and the West cannot be ignored but need to be integrated into the efforts to maintain and develop independent cultures. Drawing upon Edward Said again, the sphere of culture is not an autonomous one that is merely relevant as a "superstructure" for economy and politics. In "Culture and Imperialism" (1994) Said argues that art, aesthetics and the realm of culture need to be viewed in the context of dynamic imperial competition (see: Mathur, 2007: 7). Culture, then, is influenced by colonisation. On the other hand, the above discussion of colonial India showed the mutual exchange of design and related forms of production. Great Britain was not simply imposing its culture on Indian life, but both countries influenced each other. Nevertheless, the nature of this relation remained asymmetrical.

This is a general issue for all developing countries. They face the problem of adapting to Western culture and suffering a severe loss of traditional values and knowledge. Rajeshwari Ghose addresses this problem in terms of design. He states that the discourses on design are overpowered by dominant methodologies of the West. He suggests that we will need to wait a while until native designers of development countries will articulate their own approaches (Margolin, 1996: xix). The hope projected into Western design paradigms occurs parallel to the propagation of the importance of appropriate technology solutions at international design conferences. Ghose, however, "sees the main task of the Asian designer as bringing some semblance of order into a fragmented environment in which continuities of traditional practices and methods coexist with the discontinuities of innovation" (Margolin, 1996: xix).

The Western culture of mass consumption is proclaimed to be the ultimate goal of all societies, by modernisation theory. This results in a contradiction; while the industrially advanced societies increasingly recognise the negative consequences of

mass consumption and industrialisation, developing countries still struggle to achieve them. In India this strategy will provoke serious problems:

”The argument often heard from industrialists and manufacturers and even from the general populace is that ecological considerations are the luxuries of the developed world. The race for development must go on and the only rules that are known to have succeeded in the past are the ones that the First World, after its own success is assured, has finally begun to question” (Margolin, 1996: 195).

The paradox expressed in this statement is that the seemingly emancipating discourses in the West, such as those on environmental conservation, are now interpreted as means of ensuring the dominance of the West over the former colonies. With its massive population, India is already facing huge environmental, and social problems that might represent obstacles for its sustainable development.

3.2.10 Current Development Issues & Design Challenges

The Human Development Index for India is 0.619, ranking country number 128 in a list of 177 countries. This is relatively low; and although there is an overall improvement of development registered in India, the country is facing increasing disparities in nearly all aspects of development (HDR, 2007/08).

> “Economic growth can not be the only objective for national planning and indeed over the years, development objectives are being defined not just in increases in GDP or per capita income but broader in terms of enhancement of human well-being. This includes not only an adequate level of consumption of food and other types of consumer goods but also access to basic social services, especially education, health, availability of drinking water and basic sanitation. It also includes expansion of economic and social opportunities for all individuals and groups, reduction in disparities, and greater participation in decision-making. The Tenth Plan must set suitable targets in

> these areas to ensure significant progress towards improvement in the quality of life of all our people." (Planning Commission, 2002-2007, in: Roy & Chatterjee, 2006)

In the following pages, I want to represent available data in order to outline India's human development situation. Unless otherwise labelled, all of the following data is taken from the United Nations Development report for 2007-2008.

- The Human Poverty Index for India is 31.3 ranking the country 62nd among 108 countries; 27.5 percent of all Indians live below the national income poverty line. Marginalised groups are particularly affected by poverty, more than 60 percent of women are chronically poor, as well as 43 percent of Scheduled Tribes and 36 percent of Scheduled Caste groups17. Poverty is concentrated in rural areas. 296 million people are illiterate and 233 million are undernourished.

- The Gini coefficient18 of India lies at 36.8 ranking it only 128th out of 177 countries. The ratio of the richest to the poorest 10 percent of the country is 8.6.

- Imports of goods and services in 1990 represented only 9 percent of the GDP, whereas in 2005 they made 24 percent of the GDP. Exports similarly increased from 7 to 21 percent of the GDP between 1990 and 2005.

- 70 percent of manufactured exports were merchandise and 4.9 percent were high-technology in 2005, in comparison to 2.4 percent in 1990.

- 0.8 percent of the GDP were constituted by foreign direct investment in 2005, as compared to 0.1 percent in 1990.

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[17] Scheduled Tribes/Caste groups are population groups that are officially recognised in the Constitution of India.

[18] The Gini coefficient or Gini Index is a statistical instrument to measure inequality. Its range is from 0 to 1, the lower it is, the more equal the distribution. In this case it is measuring the distribution of wealth by income.

- Adult literacy rate lies at 61.0 percent of the population (15 years and older), which ranks it 114th out of 177 countries.

- In 2005 population in total numbers was 1,134.4 millions. It is estimated to be 1,302.5 millions in 2015 at an average growth rate of 1.4 percent per year.

- Environmentally seen, the country is of global importance not just due to its size and potential number of consumers. India is the habitat for 8 percent of the world's animal and plant species, many of which are rare and endangered species. Biodiversity is facing serious threats, although the country is signatory to a number of multilateral agreements on environmental protection.

- About 3 out of 4 rural households depend nearly entirely on traditional sources of energy for cooking and heating, i.e. fuel wood, animal dung and crop residues. Efficiency of household energy consumption rates are low and more than 56 percent are not connected to electricity networks.

- Environmental degradation is estimated to cause health costs of US$ 7 billions per year.

- Only one patent per million people was granted in 2005, and research and development expenditure for the period of 2000 to 2005 were at approximately 0.85 percent of GDP.

In general, India pursues development through "Keynesian and Schumpeterian mechanisms, with new incentives for massive investment stimulating overall demand and creative destruction leading to innovation and productivity jumps in a wide array of sectors" (HDR, 2007/08: vii) in policy accordance with the UN Development Programme.

Design is not sufficiently used as a source for development. Balaram claims that "the local design expertise meets an international standard. But it is underutilized." (Balaram, 2000: 60). He further quotes Bonsiepe to underline the importance for India of acknowledging design as an instrument for development: "If a country does

not perceive autonomous development as its aim, the potential of industrial design as a development instrument will remain untapped." (Bonsiepe cited in Balaram, 2000: 60-61)

Development is considered as the improvement of the material culture in the country. In developing countries, design can serve as a tool for the reduction of inequalities between different sections of a society. It should design responsibly in order to design goods that decrease social inequalities. In India, challenges for designers are in the sectors of agricultural production, employment generation, and rural development. But there are also other areas such as family planning, disaster relief, and literacy promotion. Most of these sectors are largely ignored by the Indian designers (Balaram, 2000: 6). Nearly four decades of industrial design in the country could not make significant contributions in these areas. Successful human development will depend on the acceptance and continued active promotion of design by Indian industry and government.

3.2.11 Conclusions: India

The industrial revolution in the West provoked vehement reactions against its enforcing changes on traditional product culture. The West turned towards Indian product culture in awe of the skill involved in its production and its authentic aesthetics. Paradoxically, it was destroying just those characteristics of Indian product culture through its economic imperialist behaviour. In the course of this interaction between India and the West, mainly Great Britain, Western design was classified as an artistic expression – its main goal to beautify the objects that came from the ugly impersonal factories. India had a thoroughly different approach to design since its independence in 1947.

Already during India's fight for independence, Gandhi instrumentalised the rich material culture anchored in Indian mythology to transmit his message through symbolic products. Gandhi pursued clear development goals based upon a vision of self-reliance on a village-centred model. One can summarise his aim for

independence to have been successfully supported by his campaign using products designed to carry symbolic meaning. With independence and Nehru's new vision of development, the role of product culture in India changed dramatically.

Design was promoted through the foundation of institutions, the invitation of international experts, and the organisation of conferences. Modernisation was to be achieved but independently from Western cultural hegemony and political and economic influence. Modernity was not rejected but welcomed when combined with Indian interests and values to promote a unique path of development. India embraced critical design theory at its best, putting much hope and effort into realising the potential promised by dependency and Marxist design theorists.

The NID was strongly influenced by these theories but was ethically based upon the Eames Report. The Eames Report in essence described the development path that Gandhi had envisioned and suggests the primary focus be the fulfilment of basic needs with appropriate technologies. It condemns artistry and creativity, denominating them as capricious.

This mind-set, together with an inward-looking and protected economy from independence until the 1980s, hemmed the development of technological competition capacities. There was no effort to access foreign technologies and cooperations with international designers focused on the appropriate technology concept for development (IJTM, 1998: 622-644).

In the past twenty to thirty years the country has witnessed a rapidly expanding economy. This growth was achieved through the restructuring of the national economy according to the standards of the World Bank and the International Monetary Fund. Structural adjustment programmes implemented macroeconomic measures for the liberalisation of trade, industry and business sectors. With the opening of the economy and extensive liberalisation measures the design approach changed too. Still drawing upon the heritage of product culture as formed by Gandhi and Nehru on the foundations of Indian culture, it suddenly had to compete globally. To a large degree this had disastrous consequences as "Western technology has buttressed the polarisation of Indian society with a small, comparatively rich,

acquisitive, conspicuously consuming, politically powerful, city-centred elite, drawing its ideas and values from the West, and a large mass of poor people left out of the circle of production and consumption by lack of employment and purchasing power" (Nadkarni/Reddy: 25, in Bicknell, 1979). India's development resulted in an enormous increase in consumption, but also intensified the social disparities among its population. Appropriate technology suddenly appeared as backwards technology in comparison to the technology available to the elites. Consumers in India are the elites. They are creating a proper culture of consumption through their product choices. These elites adopt and promote a lifestyle that is deeply influenced by former British colonialism and by modern Western mass consumption, as expressed in the use of the English language. As discussed above, the cultural interchange is not entirely unidirectional; it is, however, asymmetric. As we can see through its indicators of development, India is not only following the Western countries regarding economic growth, but it also suffers from increasing environmental and social problems.

So although India has a strong design tradition, it too is being flooded by a globalised product culture. As global competition increases also for multinational corporations, they increasingly recognise the value of employing strategies that incorporate national product culture to reach out to their target groups demonstrated by the cooperation between multinational companies and national designers. Design in this sense is however subjugated to market forces and the interests of the owners of the means of production as these are no longer regulated by the government as strictly as before the 1980s.

Looking specifically at development issues, Balaram's and Margolin's assumptions about the important role of design in the search for solutions of developmental problems in India remain to be proven. What can be deduced, however, is that design is important in India even if its impact on economic development cannot be evaluated qualitatively or quantitatively. India's specific material culture, discussed in chapter 3.2.6 on Mythology and Symbolism, reflects the cultural heritage upon which Gandhi already drew in his struggle for national independence. The Indian government is supporting and financing a number of design projects, and it has an exemplary national design policy. Considering these ideal conditions, it is Indian

designers who should draw on this rich heritage and utilise it as unique contributions for human development. As stated at the ICSID Assembly on Industrial Design and Human Development in Mexico 1979, “[p]roducts turn against man when they change into tools of compulsive consumption. On the other hand, they assume a humanistic character when they fulfil man’s needs” (Vazquez, 3 in ICSID, 1979). Once again, as also seen in the example of the GDR, the question of ‘needs’ is central alongside cultural influences on production and consumption.

4 India and the GDR in comparison

In the previous chapter I illustrated the interaction of political, economic, cultural and social forces with design policy through two examples. I outlined some of the more relevant discussions about design in the context of development in India and the German Democratic Republic. Socialist realism in the GDR ideologically pursued to establish a different consumer culture in opposition to Western capitalism, and partially managed to translate this into a unique product culture. However, it failed to find corresponding solutions of problems in the spheres of production, economy and culture. It did partially manage to create or install a unique consumer culture and cultural valuation of products. India, on the other hand, is still struggling to define its own material culture by merging tradition and modernity. India is, after all, an emerging economy with an enormous potential, and investment into design may still be decisive in its future. In the past linking design to a concept of appropriate technology has not been too successful as the disparities between urban and rural populations demonstrate most vigorously. The two examples with different cultural backgrounds highlighted the design related common problem-complexes of, defining needs, keeping and developing an independent identity, and functioning within global competition. The nodes where design collides with development issues appear in the case studies as the field of governmental policy on design, production processes, consumer behaviour and vaguely also culture.

In the present chapter the case studies of design in the context of India's and the GDR's development will be discussed in the context of mainstream Western design practice. Mainstream Western design will be exemplified by Great Britain as the UK Design Council plays a leading role in design research in regard to quantifying data and measuring repercussions in industry. This will help me to compare different attempts of putting design theory into practice.

4.1 Political-Economy of Design

Originating in the industrial revolution design is an integral part of the social changes that developed with this historical process. In the division of labour design represents the singling out of the creative and innovative processes in production. It contributed to the development of a social class of knowledgeable elites with access to information on the production process as well as decision-making competences on what is suitable for the mass market.

In the first half of the 20th century, before the Second World War, functionalism derived from the Bauhaus movement coined design theory. A strong humanistic ethos pushed designers to try to find the ideal form for objects, demonstrating the power of the social position that designers have in a society of mass production. This is visible throughout the Fordist period of Western development. As society strived for egalitarian material wealth, the designer fulfilled the function of deciding what objects should be produced and what they should look like. The spread of rather unanimously designed goods led to what is in the West remembered as “keeping up with the Jones’” while in East Germany it was the struggle to keep up with Western living standards.

As the Fordist-Keynesian system reached a crisis point in the 1970s, due to market saturation, the oil crises and high state deficits, design also reached a turning point. If the designer was no longer to find the ideal form that appealed to the masses, and most parts of society were already in possession of all objects needed for a high standard of living, what role could the designer possibly take in the production process? Being part of the economic logic behind the industrial production system, the designer had to adapt to the new dynamics of production. The structural imperative of economic growth directed the designer away from ideal form-building to contributing to the speeding up of capital flows in society by planning the obsolescence of objects. There are different types of obsolescence, but for development it is merely relevant that the objective of designers had shifted in theory, from the position of being a social link between producer and consumer to the instrument of producers. Even though designers had always been value-adding agents of the owners of the means of production, it was only in the latter half of the

20th century that mottos such as “form follows fun” became the credo of designers, moving away from fulfilling functions for a society of need to fulfilling functions entirely for market mechanisms. Design theorists were already critical of this development of the role of designers in society, calling for more social and environmental awareness. The actual practice of this type of design was however, reserved to a small fraction of designers.

Beginning with increased globalisation in the 1990s, several new trends emerged in the design sphere. Firstly, the new political economy introduced by Reagan and Thatcher in the 1980s had led to an increased international division of labour. The geographic location of designers in the West opposed to the sweat-shops where the designed goods are produced in developing countries illustrate a new inegalitarian constructed production process. Not only is this division of labour economically polarised, but it also incorporates cultural dominance of the West as the choice of the form of material welfare is determined and defined by a creative knowledge-elite that is located in the centres of Europe and North America. Designers are thus part of an aggressive expansive element of Western society as new markets are created, but no longer with the basis of a humanist ethos of creating an egalitarian society, but where the motive of creating profits dominates the choice of form.

With the increased information flows in the 1990s through the development of information communication technologies, there is also an increasing awareness of designers as to their contribution to once again reaching a crisis point of this economic system. Although there are a number of socially aware designers that try to contribute to a more egalitarian global society as demonstrated by their efforts outlined by the design for development projects, it is mostly the awareness of environmental limits of this production system that is receiving attention.

4.2 Design Policy

In the GDR there was no official design policy until the AIF was founded in 1972. The state intended to impose state ideology and to establish related criteria for design.

The quality of design depended on individual designers, but it was also influenced by the requirements of the political system and its economy: products needed to be of high quality and should be durable as the government had to deal with an environment of scarce resources and wanted to promote a non-consumerist society.

India, on the other hand, had a clearly defined national design policy as part of its development strategy since the years following its independence. Nehru actively promoted design as an empowering discipline by inviting internationally renowned designers and invested into educational institutes of design. Currently, it aims to educate 5.000-8.000 designers a year and is investing more into new academic centres for design. The design business is expected to be responsible for one per cent of India's GDP, an estimated £56 million, in 2009 (IDS, 2009).

In the West design policy has been formulated in various ways since the early 20th Century. The German Werkbund, for example, was founded with the intention of improving the relation between artistic heritage and new industrial production methods. Policy usually formulates goals of qualitative dimensions, aiming at presenting regions as attractive for tourism and investment in order to attract foreign capital. The UK Design Council was founded in 1944 and has only recently begun to quantify the impact of design on businesses, thus taking a leading role in quantitative design research. It aims to increase awareness for design within society and to counter the public image of design, which sustains that it is applied for aesthetic purposes only (DIB, 2005/06). The Business Design Report 2005-2006 illustrates the economic significance of design in Britain:

- There are 185,500 designers in the UK; 62% of those are under 40 years old, 61% are male and 6% are from ethnic minorities.

- Every £100 a design-aware business spends on design increases turnover by £225.

- Businesses in which design is integral to their strategy; more than ¾ say, they have increased competitiveness and turnover through design.[19]

The UK Design Council has implicit goals for the country's development, namely:

- Driving competitiveness in industry,
- Improving innovation in public services, and
- Design skills development.

Improving competitiveness is important for export-oriented economies, especially in those with saturated markets. Data from the ISIS Innovation technology transfer office of Oxford University shows that even small investment in design contributes to the quick commercialisation and value-enhancement effect for new technologies (ISIS, 2009). The main motivation behind this project remains the creation of surplus, even if the designs draw upon synergetic social factors such as the trend towards green design. Sustainability is a focus point of the Design Council that underlies its meta-goals and concentrates on raising awareness.

Many innovative ideas are being developed by the private sector in Western countries, but they do not gain sufficient attention in order to solve contemporary problems on a large-scale. For example, a store concept that operates without any packaging material, saves an estimated 1,5 tonnes of CO_2 emissions annually (DC, 2009). It works well with customers but as it is just a single project, it fails to have a widespread environmental impact. Government policy on packaging could give

[19] Measuring these developments requires new methods. Research was done in collaboration with UK universities such as Cambridge. On the question of methodology, they write: "In order to find out how design impacts on business performance, we had to isolate design from other business factors. We built statistical models to find relationships between design and businesses' performance. We measured a number of indicators that characterise business growth. These include turnover, profit and employment growth. Then we measured the effect that businesses believe design has on their growth" (DIB, 2005/06).

incentives in order to promote this concept on a large scale. Because advertisement and product information is traditionally communicated through packaging material, new forms of knowledge transmission will have to be invented. These forms to be invented need to be culturally and socially acceptable and should assert themselves against the industry's market penetration through package advertisement.

The three different examples of design policy in the GDR, India and the UK, show three different approaches to design and three different government strategies as to how design policy can have an impact on development. The East German example demonstrates the attempt to create a society that is not based on consumerism by discouraging identification with its own material production. It failed as it was simultaneously trying to keep up with the economic growth rate and level of material wealth of West Germany by increasing productivity – a fundamental contradiction at the core of the system. The example of India shows a design policy that is deeply embedded in tradition and material culture specific to India. It also demonstrates a clearly conscious and strategic employment of design as a mean for socio-economic development. The UK design policy, that can be seen as representative for globally dominant Western design policy, shows how design is viewed as a tool for innovation to increase competitiveness, attract investment and foreign capital and is thus reduced to a strategic factor for generating economic growth and securing the UKs leading position in business and trade.

In all three cases design policy or absence thereof affected design outcomes showing that governmental ideology influences design policy substantially. More than political pressures there were other socio-economic factors that affect design though, one of these are the means and the processes of production.

4.3 Production

As outlined in chapter 2.2 design finds its origins in the industrial revolution. It is therefore an integral part of industrial production methods as it was singled out as the creative step in the division of labour. This step incorporated knowledge and

involvement of the designer in the production processes. With the increasing complexity of industrial production in terms of expert knowledge required in various fields of the natural sciences, this part of the design profession has seemingly reduced significantly. Production methods are thus mostly guided by economic principles of efficiency and increasing profit margins, rather than the functionality of the objects to be created. Also, the global expansion of Western economic structures consequentially brought a parallel expansion of Western industrial production methods. As the designer's role in creating production-means and -structures is nearly eradicated, design is increasingly coined by economically-oriented production processes. The impact of economic pressures on design can be observed in both India and East Germany by looking at the limitations of the production processes.

In East Germany production was not aimed at supporting a society of mass consumption. Distributive measures and planning incentives intended to secure a high standard of living defined in material terms, while the SED applied other methods for cultural development not based on material wealth. The processes of production themselves were not questioned by the government as influential on the material outcomes. In other words, industrial production was taken for granted in a Marxist tradition as necessary historical development: "Marx seems to have regarded men's needs as biological drives which were real, objective and measurable, and as much susceptible to scientific observation and understanding" (Jones: 92, in: Bicknell, 1976). While needs were thought to be calculable the social consequences were taken into consideration, realising the development of a working class proletariat. Counter-acting the fetishisation of objects in society was practiced in a top to bottom strategy. The SED assumed that by forbidding advertisement and restricting consumption possibilities it could control the subjective needs of its population. It did not consider that the whole organisation of society along industrial processes of production that are ultimately oriented towards increasing productivity, may influence the material culture of a society. If the basis of society, the proletariat, is occupied with production, but any sort of identification with the actual objects being produced is systematically destroyed, then the identification with the produce is equally destroyed - resulting in irrelevance or dispassion for producing. Simultaneously, the SED encouraged a productivity increase aimed at economic

growth – promoting an improved standard of living if everyone works more and harder again contradicting itself in essence.

Furthermore, resource scarcity constrained productivity and from the late 1960s onwards East German industry showed technological deficits. Although production was centrally planned by the state, and demand and supply were calculated; it relied on international economic structures and was affected by competition, which also affected the practice of design. Design thus had to deal with several contradictions within the real socialist system: to produce high quality, durable goods that appealed to the masses with scarce resources to generate economic growth while not promoting a fetishisation of objects, to create a high material standard of living that fulfilled social expectations influenced by Western television without imitating Western goods and to produce by double standards for the national market and for exports.

In comparison, import-substituting industrialisation was promoted in India. Design was intended to further develop traditional production methods in this nationally oriented framework and combine these with Western industrial production methods. On one hand, this was in order to empower particularly the rural populations by increasing their productivity without taking away their identity by imposing entirely new production methods. On the other hand, to develop new production processes that are efficient and demonstrate increased productivity without simply adopting Western industrial structures. Moreover, government intervention was not as extensive as in the GDR, and foreign currency was reinvested to import capital goods, which were then utilised to produce consumer goods (Raj and Sen, 1961, in: Kirkpatrick, 1983: 11). Import restrictions on foreign goods allowed the national industry to develop, including national design business. Numerous national brands emerged, which did not disappear in the course of economical liberalisation. They merged with multinational corporations in order to remain competitive. Although scientific literature is scarce on this subject, there are no Indian brands that could compete by themselves on international markets and they still rely heavily on domestic demand (Interbrand, 2008).

It was only with the economic liberalisation of the 1980s that India experienced large-

scale productivity increases as foreign capital flowed into industry and expanded the use of Western industrial processes of production. In this sense, economic development was nearly entirely spurred on by adopting Western industrial patterns and Indian design policy failed in developing new, individual processes of production in the context of global competition.

Because of the global trend towards liberalising trade, international competition increases pressure on production. Competitiveness is meanwhile a global competitiveness as the UK Design Council explains: “Our research shows that, through effective use of design, businesses can add value, become more productive and gain market share. For every £10 design-conscious companies invest in design, they make a profit of £8. (…) share prices of design-conscious companies out-performed other firms by 200 per cent between 1995 and 2004. (…) Using design to make SMEs[20] more competitive and innovative is a matter of national economic importance” (Alan G. Lafley CEO Procter & Gamble in: DCAR, 2008: 9). This highlights how the West is internationalising their production processes, relegating steps to strategically beneficial areas to be more “efficient”, this often expresses itself in outsourcing labour intensive productions steps to developing countries such as India where cheap labour is available in abundance. The “intellectual” or creative and artistic steps in the division of labour remain in control of the West though, steering not only the processes of production but also determining what will be produced for consumption. The effects of determination of the objects to be produced are broad ranging from the environmental implications to the cultural expansion of certain objects of daily use affecting our behaviour as well as influencing style and aesthetics.

The question of what is produced is in this context of industrial production processes, is another element of design. A minority of people, namely designers who are mostly located in the West, decide what is needed: “Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecologically

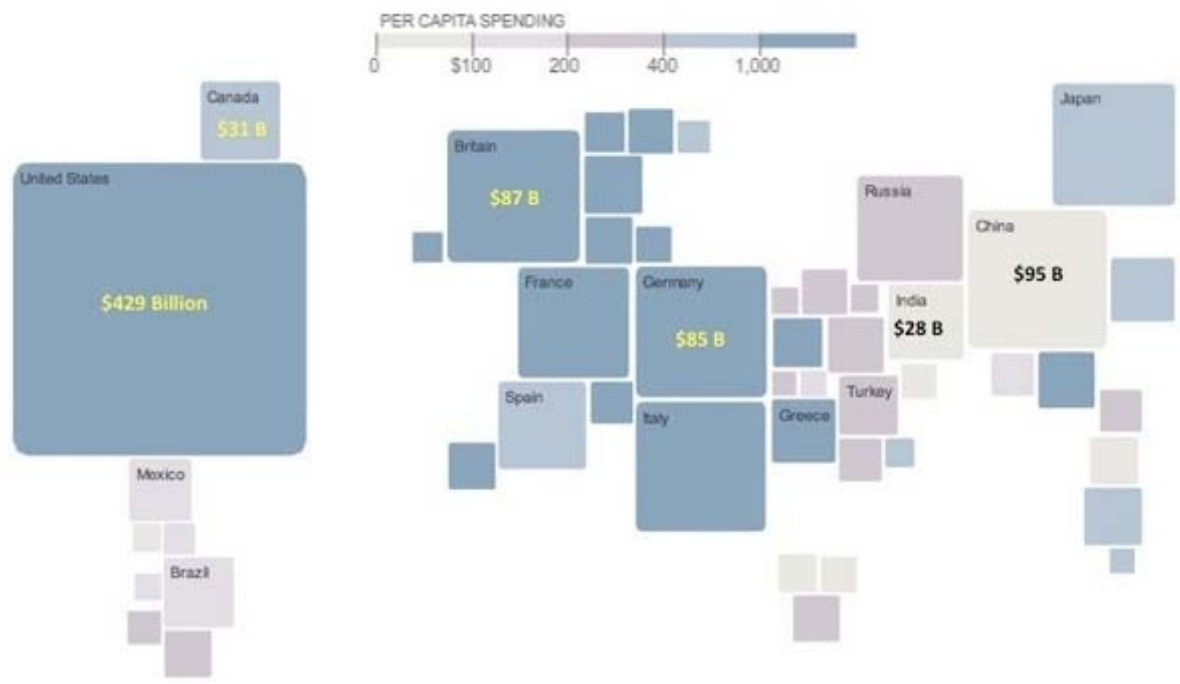
[20] Small and Medium Enterprise

possible and to which all can reasonably aspire" (WCED, 1987: 44). As the production methods and structures are determined by economic reasoning though, the produce is equally created (i.e. designed and produced) to increase turnover. In other words, as productivity has to increase, the output increases and logically consumption needs to increase. The design of objects is therefore oriented towards increasing consumption.

4.4 Consumerism

The West is characterised by a culture of mass consumption. Its economy depends on ever-increasing consumption and the search for new markets in order to generate growth. The map below shows the relative amounts of spending in the world, using the example of clothing and footwear from 2007:

Figure 5: Global Consumer Spending Map



Source: http://www.nytimes.com (2008)

Consumerism has been subject to criticism for a long time. Thorstein Veblen coined the term "conspicuous consumption" in his work "The Theory of the Leisure Class"

(1899). Veblen states that consumption is used to display social status rather than to meet basic human needs (Veblen, 1899). Since the late 1970s, the markets of most Western states are increasingly saturated. Western design movements such as the Italian Memphis Group appeared and responded to this situation. The obsoletion of post-war functionality led to a "crisis of functionalism" and brought forth new formulas of postmodernism such as: "form follows fun" or "form follows emotion" (Schneider, 2005: 138-160) instead of the traditional Bauhaus-motto "form follows function". They accompanied pop-culture, fleeting trends and ephemeral fashions that epitomise planned obsolescence and styling. "The basic function of design in a capitalist economy is product-differentiation aimed at stimulating consumption" (Kuby: 207, in: ICSID, 1979). This fact is leading to some of the development problems outlined already - particularly environmental ones, but also ones of social and cultural dimensions.

The GDR opposed this kind of consumption for ideological reasons, and it tried to discourage this type of behaviour by banishing advertisement and introducing unconventional forms of consumption not related to the fetishisation of objects but oriented by the 'needs' of the people. Neither did it offer a huge variety of consumption goods of the same type. GDR designers abided these ideas by designing goods that distinguished themselves from Western goods in their longevity and time-less fashions. However, its attempt to create a culture of responsible consumption failed because most of these measures were implemented as reactions to economic pressure, rather than according to a distinct strategy of consumer education. At the same time, it entered an ideological competition with the West. Fundamentally, however, no alternative system to mass consumption was developed, evading the question of how to generate required surplus without mass consumption.

Meanwhile criticism towards consumerism has mounted: opponents argue that freedom of choice cannot exist in an environment where consumers are preconditioned by industry. Advertisement and the media are controlled by businesses seeking profit. The information they transmit is often wrong and founded upon illusions. Impulsive consumption is the consequence. Demand is created through manipulative information and overexposure to choice and information

disables critical evaluation (Keller: 193, in: ICSID, 1979). The "[h]uman being is not a consumer. [The] Consumer is a result of the production – distribution – consumption trynome [sic!], while the user appears as a result of the binome man – environment (…) the question of consumer development in terms of consumer education, criticism and rational market behaviour, based upon self-confidence and economic and cultural identity – is even more important, because of the uncritical import of marketing or some of its elements, the phenomena which can best be described as 'cocacolisation'" (Keller: 195, in: ICSID, 1979). This essentially Western phenomenon is being exported or is expanding globally. The GDR was transformed to adopting this culture of consumerism overnight, while in India it is a slower process that has been intensified since liberalisation of the economy.

In response to this critique there are new social movements appearing that reflect a growing awareness of the negative aspects of consumerism such as "Freegans" and "Dumpster Diving". They live off the surplus production of Western society without paying for it[21]. These movements are critical of consumerism and perhaps reflect what the GDR failed to do – develop an entirely new form of culture of consuming. The way a society deals with consumption is essentially a question of culture, as the name culture of mass consumption anticipates. Apart from these new social movements, that remain Western subcultures until now, two main trends are observed in Western consumerism:

(i.) Concerning the supply side, there is a beneficial tendency to use more 'soft' technologies and products (fair trade, green products etc.)

(ii.) Concerning the demand side, there is a harmful tendency always to consume more and more.

(Faber et al., 2000: 53).

[21] Freegans are people who choose to live from food products that are thrown away by shops at the end of the day; Dumpster Diving is similar conept where the garbage is searched for re-usable products that have been thrown away. For details see for example www.freegan.at

So, fundamentally, although there are attempts to change things in the core, mass consumption on a throw-away basis remains the main mean to generate profit.

India and other developing countries already face many of the same problems as the West and social trends such as the subcultures outlined above may perhaps appear there as well. At the moment however, sub cultural phenomena such as freegans appear mainly in the West.

Rather than continuing its pursuit of an independent development path, economic pressures have pressured India into following the footsteps of the West, including making all the same mistakes with similar environmental and socio-economic consequences. As indicated in the last section, according to Interbrand, the most known brands are US brands. India's strategy of development intended to protect its national economy and to build up its industry and brands through protectionist measures. Later, economic pressure and asymmetric relations led to the implementation of liberal reforms. As a result powerful brands entered the Indian economy and its markets. In India, existing design business is utilised by international enterprises in order to improve their competitiveness on Indian markets, and to address Indian consumers more efficiently. This is shown by the following examples from the private sector:

Western penetration of developing country's markets, as outlined in the chapter on India, leads to the creation of joint ventures such as the Hewlett Packard Research Labs that apply "a research method termed 'Contextual Invention' (...) for design research in emerging markets like India. The core value of this method lies in its multidisciplinary approach towards design research. The process takes inputs from design, business and technology in order to reach a comprehensive solution. It involves a deep understanding of user needs and cultural context to drive design ideas, business modelling and technological investigations. It aims to inspire and generate new technology inventions with high social and business value" (Aykin, 2007: 193). Indian product culture has thus become subject to Western profit interests, the symbolism and tradition carried through objects is utilised solely in order to increase profits and win market shares. Design is no longer an instrument to

maintain identity in a rapidly changing world, but is employed without thought to the environmental, cultural and social consequences.

4.5 Culture

The first of Johan Galtung's 15 theses on development theory and practice is: "Development is the unfolding of a culture; realizing the code or cosmology of that culture" (Galtung, 1996: 127). This implies that there exist many different forms of development rather than a single one. Imposing one's own definition of development and thus obtruding a cultural code onto another one is denounced as cultural violence by Galtung. If this imposition is institutionalised, it is transformed into structural violence. By definition then, if one considers processes of production to be part of culture, then industrialisation as development strategy is a form of structural violence. By imposing industrial processes of production in order to achieve economic growth and improve welfare through the increased exchange of material goods a new social order, economic behaviour and use and position of material objects, are essentially also being imposed.

Form in the past has gone through "many hands and heads in the course of centuries; witness the axe or a teacup. In these early times the designer was not an individual but a collective. The entire society took part in experimenting, choosing and rejecting" (Nelson, 1957: 172). In industrial societies the choice of form has been singled out as one step in the division of labour. In India, design as a concept deriving from a culture of industrial production, is also employed to consciously re-think the form of things that are produced with traditional methods. Aware of the fact that with changing processes of production there comes social and cultural change, design was seen as an opportunity to sustain traditional knowledge and keep alive national cultural heritage and identity. Design thus becomes the conscious instrument of steering creative destruction and maintaining identity, in a rapidly changing environment. Design fulfils a decided role as carrier of culture, instigated by the state.

In East Germany the cultural dimension of processes of production were not taken into account, the sphere of production was essentially a closed off entity in the systematic thinking of the SED, merely affecting class division but not the use or perception of material goods. Through the devaluation of the own material cultural production of its workforce, East Germany facilitated the development of envy of its population towards West Germany as television transmitted glorious images of incredible goods that improve life on all levels. Had there been an educative and active promotion of East German products that were often very high quality goods compared to Western products, there might have been more resistance to adopting the capitalist system in its dominant form.

Meanwhile critical designers explain how the handling of the material objects that surround us in the West, is manipulated by designers that are driven by economic profit motives. In “How Things Don’t Work” Papanek and Hennessey list ten types of obsolescence commonly used in product planning: technological, size, powered, additive, marginally improved, constrained, instant, aesthetic, protective and easy (Papanek, 1977). In the same book they plea against consumerism and call for the values: repair, share, reduce, reuse and recycle (Papanek, 1977). These are concepts that are still being employed in social niches; Western mainstream culture is however based upon planned and perceived obsolescence of objects. Designers play a vital role in this as they are reproducing these characteristics in objects that are being assembled and distributed all over the globe. Cultures, such as the Indian one, that traditionally have a very different material culture, not one of disposal and devaluation of goods, are therefore subjugated to enforced cultural alteration and assimilation.

Another aspect of design that is cultural, are the aesthetic functions. Aesthetics are a cultural element, differently perceived at different times by different societies in different regions. It is something that is found everywhere and in every culture but cannot be clearly defined. Designers today, as demonstrated by the examples of contemporary design for development projects in chapter 2.10, often follow a Papanek approach of appropriate technology, rejecting any sort of aesthetics. “Beauty as a value is universally exhibited even in the poorest societies in other cultures. It exists not as a by-product of the practical but because it is treasured as

such and scarce resources are diverted to provide it. If the functionalist was often purveying a covert (…) aesthetic, the ‘Design for Need' man can easily end up forgetting aesthetics all together amid the urgencies of ‘problem solving’" (Jones: 94, in Bicknell, 1979). The question this raises is: what is the cultural importance of aesthetics in material culture? By giving deprived peoples merely objects to allow them to improve productivity on a very small scale, there is a strong element of structural violence as economic growth is given priority to well-being. There is, on one hand, a reproduction of poverty in object form taking place as the technological gap is maintained between the West and the developing countries, and on the other hand, the cultural function of beauty is neglected giving it less importance than other functions.

Bonsiepe claims that “the designer as a ‘physicist of culture’ is situated in a strategical point of the system of objects” (Bonsiepe: 45, in ICSID, 1979). The designer needs to reflect on the producing and reproducing dynamics that are set in motion by decisions made in the design process. Consciously choosing to neglect the aesthetic functions of designed products does not pass without consequence. The exact consequences are difficult to identify and measure, but a society without beauty seems impossible to be satisfied.

4.6 Sustainability

The pivotal importance of sustainability for the future of the planet and life on it needs also to be taken into consideration in design. Seeing that environmental issues were not really a priority on the agenda of the GDR, it was more accidental and because of its economic limitations that East Germany had a slightly more environmentally friendly consumer culture than the West. In reality however, the GDR had highly polluting industries and production methods, putting environmental protection well at the bottom of its agenda. In matters of social sustainability one can mention the widespread and equal education system in the GDR that was meant to ensure the same accessibility to knowledge for everyone. Economically it also strove for an equal and stable distribution of wealth – it failed to be sustainable simply because the

entire system failed to last. India faces many environmental and socio-economic problems, as well as a high population growth rate. None of these problems are seriously confronted by design solutions that aim at widespread sustainability enhancement.

Meanwhile the West has achieved the slow recognition that in the 21st century it is no longer the conquest of nature that is most important, but to create a harmonious relationship between society and its environment (Leis, 2000: 95, in Faber et al., 2000). But even the recognition that with the globalisation of economy and technology, of communication and transport systems, also aberrations are internationalised has not led to major steps of change towards this insight. In an interdependent world insular thinking equates to reality loss and a rejection of insight towards the challenges of interdependence itself. Even problems in seemingly far-away places – such as pauperisation, environmental destruction, (…) have global boomerang-effects (Nuscheler, 2000: 473) and simply moving environmentally unfriendly production structures to countries such as India will not solve environmental or socio-economic problems in a sustainable way.

Design in this international context faces several problems, says the CEO of the UK Design Council David Kester: ”Policy and business leaders have a problem. When discussions focus on taxation, R&D or other common issues, definitions are relatively clear and conclusions can be drawn. When the subject turns to design, it sometimes feels that we are all back in the tower of Babel. We don’t share enough common data and our approaches to defining design are too often at variance” (IDS, 2009: 3).

Great Britain has several design associations. UK Design Council takes economic competition with ‘emerging’ economies into consideration, seeing China and India for example as major opponents on the market, while funding development at the same time. Apart from this being fundamentally contradictory, it proves free market pressures as incentive for innovation and progress. It does not however, seriously consider in investing in design in developing countries in such a way as to avoid countries such as India causing major environmental problems that will surely affect the West at some point as well.

Taking a thesis from Johan Galtung that proposes an interpretation of economic growth as economic activity – thus linking nature, production and consumption instead of disposing of important variables as externalities (see also Wallerstein, 2006: 67) - a cycle can be developed in which intrinsic growth in quality and sustainability indicators becomes more important than pure increase in consumption (Galtung, 1996: 130, 132). Designers would lie at the heart of such a change in perspective, but have in the mainstream, nor in India taken such an innovative step. This would however just be one suggestion of many as to how to approach the issue of sustainability and merely indicates that designers have largely failed to approach the fundamental issues of the question of sustainable design: namely the production and consumer culture of global society.

5 Conclusions

“Design is a product of human agency and itself a human agent” (Highmore, 2009: 276) and therefore a tool that can be reinvented to reinvent our world in a sustainable way. So far the use of this tool is mostly as an instrument of the ruling powers not to change, but to maintain the status quo of global structures.

The aim of this thesis is to position design as a topic in the development discourse where it is usually eclipsed nearly entirely. Design is discussed as the process of giving objects the form they have. Development is viewed as the interlinkages between social, political and economic changes in historical context and the intention to control or steer future changes in these spheres.

In the past, experiences within the United Nations organisations have shown theoretical exchange between the design and the development fields that resulted in the execution of some combined projects. With time, the term design was replaced by appropriate technology as the limitations of form, alone, to solve problems were recognised and the more extensive definition of design was too vague. This was, however, a misinterpretation of design, which from that moment on, has not been taken into consideration again in developmental strategies. Design was in this moment disembedded from its actual position to strive for functionality in the material form for the benefit of human beings, and placed in the position of the private industry as an instrument to add-value and distinguish social groups.

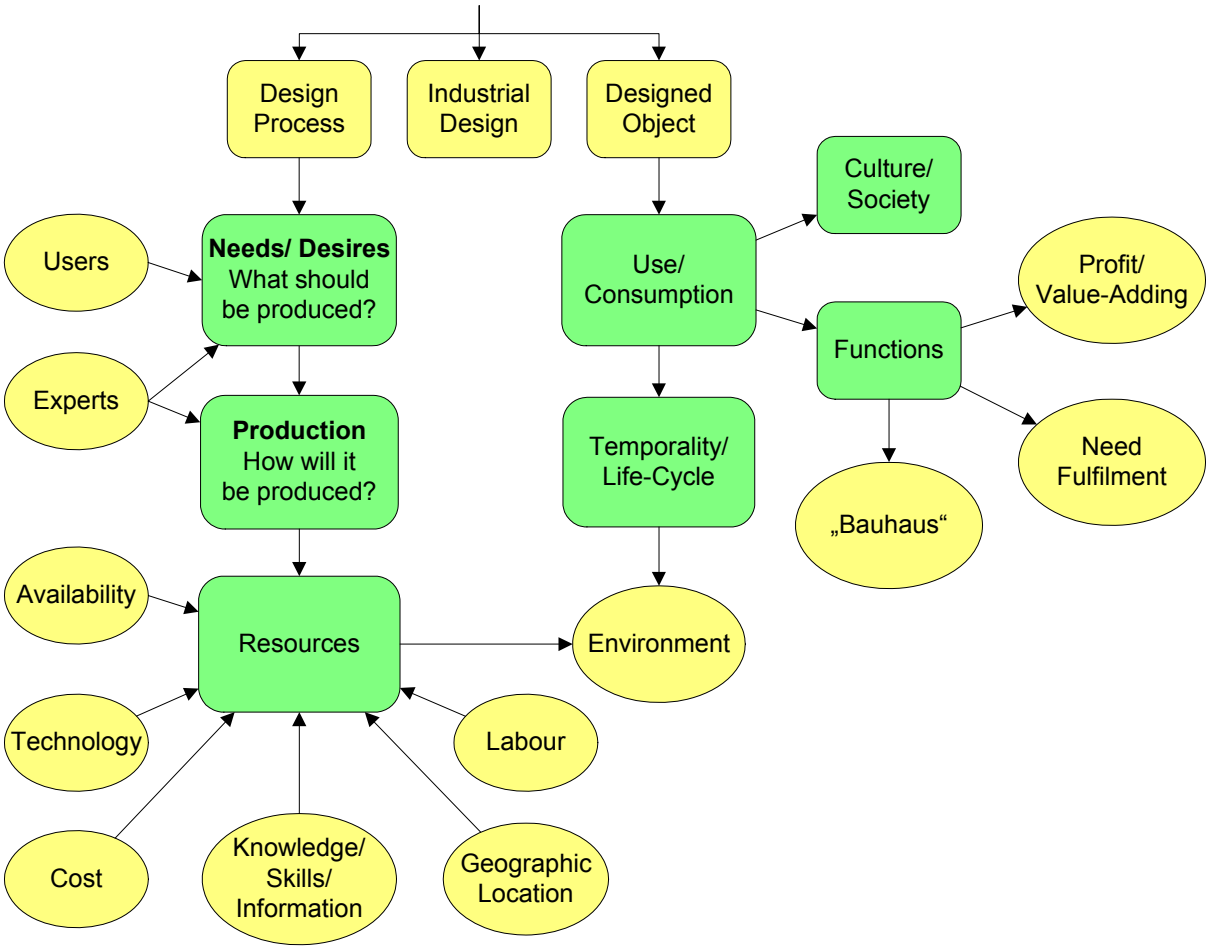
Only recently, creative processes and the multiple aspects of design have been rediscovered for the importance of steering and changing development, but still, initiatives emanate mainly from the design sphere and not from development experts or institutions. This is of interest for development because designers are increasingly addressing problems of development with their specific methods. The reasons for this are manifold and could not be discussed within the scope of this thesis. Design has a theoretical basis which could potentially contribute to development but firstly, it is only pursued by a select group of designers and design organisations, and

secondly, it only shows limited success in practice – a phenomenon also referred to as the Design-Science Paradox.

The complexity of the issue and the rarity of successes cannot be the only conclusions to be drawn from this field of study. So, through layering the various dimensions of design - the design process, the production process, the consumption and/or use, and the disposal of designed objects – with the interdependent spectrum of development issues – mainly economic policy and culture – certain conclusions about design's role in and for development could be reached in this thesis.

A peculiarity of this process that needs to be taken into account is the combination of scientific procedures and creative or intuitive elements that are both part of the design discipline (hence also the common perception of designers as artists). Furthermore, the framework for design needs to be taken into account. This framework incorporates the production process of the object to be designed, as well as the context that the designed object will operate in, once it is produced. The following diagram visualises the contextualisation of design:

Figure 6: Dimensions of Design



Source: Diagram compiled by Isis Frisch

As shown in the diagram above, there is a wide range of disciplines and topics associated with design. Critical design theory confronts the interrelationship of social, environmental and economic problems and design. It emphasises the responsibilities of a designer, which they should assume and accept as consequences of the practice of form-giving. The complexity herein lies in the fact that the consequences of form-giving are two-fold; they affect the production and the use of objects. Therefore, they reach into the lives of the people who are related with the designed object in one or both spheres. Fact is, that nearly every single relationship within this network of interdependencies can be analysed in great depth. For example, the relationship of a user and an object receives special attention from anthropologists. Technology is also studied by various disciplines; technology in relation to culture or

ideology, technology transfer, appropriate technologies, and so forth have all been subject to research. Psychology also studies multiple levels in the user/consumer sphere that are relevant to the designer. In other words, it appears impossible to unite all these issues in one discipline of design. But this is not the point of being a designer. The challenge for a designer rather lies in grasping the essential knowledge of the various fields, and in recognising their interrelations in order to solve a particular problem. In other words, the designer requires transdisciplinary expertise that should serve to solve specific tasks.

The designer is a generalist who knows how to apply knowledge creatively. One can compare the designer to a composer who knows how all the different instruments should sound and who combines them in his ensemble but does not need to know how to play each instrument individually. The different currents of critical design theory thus do not contradict themselves in essence, but chose to focus on different parts of the orchestra. Marxists emphasise the mode of production and economic structures that influence design. Dependence theorists address the asymmetrical power relations of centres and peripheries. The movement in the wake of Papanek, the most prominent of critical design theorists, tries to focus on the fulfilment of “basic needs”. Critical theory stands in contrast to the functionalism of Bauhaus without excluding it. The functions of a designed object are always integral part of design, but the term “function” is soft so that it can include and exclude more or less of the different fields associated with design. Awards for responsible design, as shown in 2.10.5 and 2.10.6, reflect a general current of increasing social awareness in the discipline.

Development concerns itself with existing problems, like design does. Compared to design, it focuses rather on the problems of developing countries; it uses different instruments to find solutions; and it draws upon different networks to implement its strategies. The complexity of a development project lies, as in design, in coherently bringing together vast amounts of knowledge from different disciplines – the policy framework, the different environmental effects, the immediate and long-term consequences on society and culture and, similar to design, directing all the involved actors to achieve goals that are themselves issues of debate. In design the actual process of building a form is multi-faceted and so is the actual implementation of a

development strategy. A chorus of terms such as ‘ownership’ and ‘empowerment’ that are vague in their definitions illustrate the bulk that the development discipline has reached in regards to human and institutional relations.

Inevitably, two such broad and inherently transdisciplinary fields overlap in some areas and also show interdependent spheres of interaction. In section 2.10 the examples of design projects for development not only demonstrate the efforts of designers to contribute to development, but also highlight that most of their efforts focus on the actual form of objects that will be employed to solve development problems. The actual functions of the object are seen as the solution to poverty and other development issues. The designers focus on creating objects that fulfil functions that they think are helpful because they increase productivity or facilitate transportation. Essentially they are creating appropriate technology using design processes. Even though awareness for necessary embedding in policy and skill transfer is increasing, the majority of projects do not concern themselves with what critical design theories attend to – the more complex environment of design synthesis. Similarly the UN cooperations with designers resulted in nothing more than the distribution of appropriate technology. The limited results of these efforts so far, point towards the fact that these projects are happening within certain institutional and agency structures that cannot be overcome. Whether this is due to the strength of agency and rigidity of structures or in the failure of designers cannot be answered from the information collected. Speculatively one can assume that it is perhaps a blend of both. These are, however, just the obvious overlaps of the two disciplines as their name “design for development” clearly state. To find the deeper areas of interaction this thesis used the more or less closed off design system within the German Democratic Republic as one field to filter out these spheres and India, a design-conscious emerging economy, as a second example. They were chosen as case studies as they both followed a decidedly different development path and different strategies of development compared to the West.

In the analysis of the German Democratic Republic, design failed its own theoretical expectations within the system of socialist realism - as the wave of Western consumer goods that flooded Eastern markets after the fall of the Berlin Wall and depleted nearly all Eastern goods, demonstrates. In the GDR, ideology could have

theoretically led to a unique, high quality, egalitarian and sustainable product culture with the aid of design processes. Instead resource scarcity impelled East German designers to make the best of the situation, thus leading to products designed to be durable and ‘functional’. What ideological party policy did do was destroy material identity. Through its consequent anonymisation of form, in the pursuance of an antithesis to mass consumer society, it eradicated any symbolic and cultural identification with the nations produce. In a dictate of the proletariat this was quite adverse, as the whole system was built on the idea of the valuable social position of the worker. The example of the GDR also showed that design only had a minimal impact on production processes. Design theory allows the designer to substantially intervene in the production process, in the GDR more attention was given to designing objects functionally than questioning the way they were produced. Further problems around design in the GDR were: the failure of the system to clearly define the needs of the population and to translate these materially, and the failure of steering competition into the direction of innovation rather than into courtship with the party elite to bargain more resources.

The analysis of India shows some decidedly different inclinations of design. Design was deployed more decisively as a strategic instrument for development, mainly to preserve tradition and cultural identity in the process of developing and modernising. This goal found more success in its fruits of theoretical debate at the numerous design institutions and conferences than in reality, as the elitist structures, remnants of British colonialism, reproduced themselves in the practices of educational institutions. No unique, fundamentally differing from the Western model, system of providing the Indian population with the material goods it requires, was developed. Its production processes are generally reproductions of industrialisation as it occurred in Europe, with all the same social and environmental implications as in the West. Nevertheless, design heritage does have at least a representative presence on the market and is relatively strong compared to other developing countries that did not pursue such a strong design culture as India. Design may therefore be a factor in strengthening Indian competitiveness on the global market – contributing to a developmental goal as generally formulated by WB, IMF, UN and other development agents. This is visible by the plentiful examples of mergers of national companies

with multinational corporations, reinforced by the large and strong domestic market of India.

The two examples show that mass consumerism, by some development agents considered to be a desirable achievement, is definitely an important issue for design. The culture of consumption and consumer behaviourism, are both part of the system of distribution related to the production process. Mass consumption requires mass production and vice versa. If the demand recedes, designers can contribute to revitalising it. If the supply cannot meet demands, as was the case in the GDR, the designer can affect production. To put it shortly: in either case design is simply supporting the system – it is not steering or forming it.

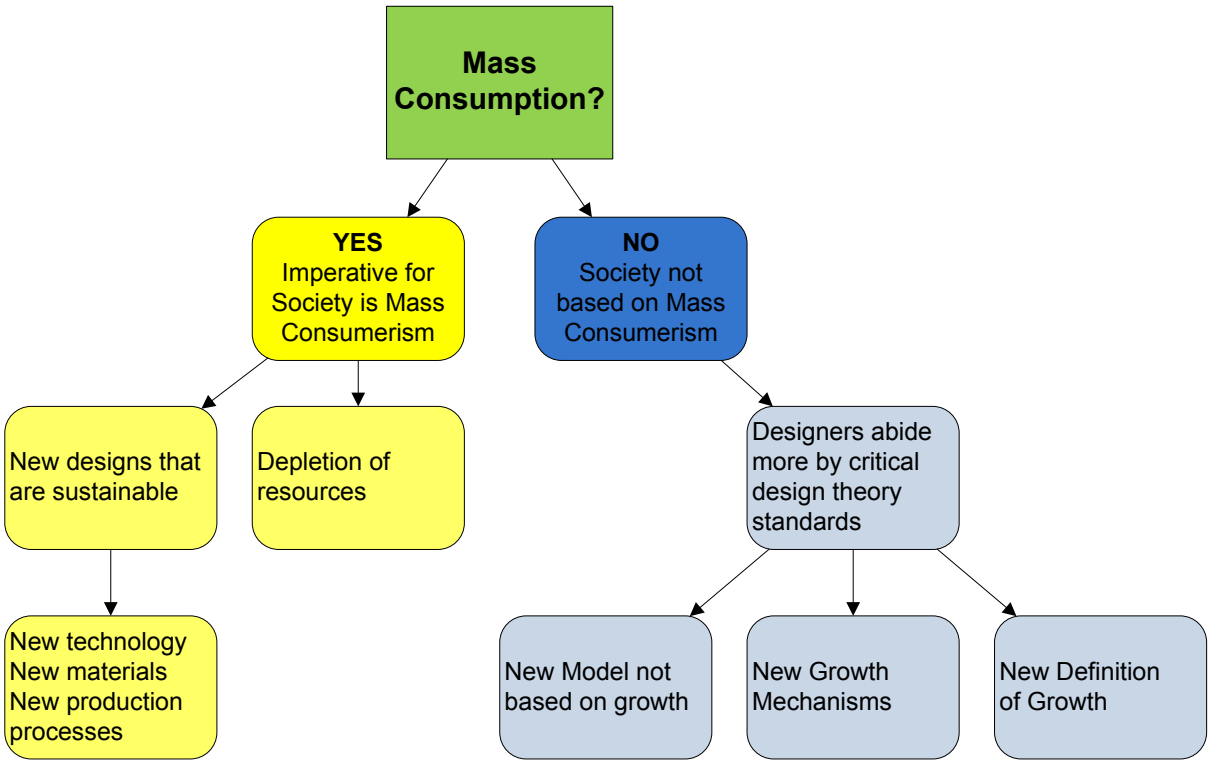
Although design as a distinct profession has its origins in the Western industrial revolution, it is also a term that describes any form of intentional form-giving. Thus, its meaning is derived from its cultural context. In the context of European colonialism and the current globalisation, the concept made its way into the everyday lives of other cultures, both through the commerce of designed objects, and through increasing industrialisation. Development too, is a term that originated in the West and was globalised during and after the Cold War.

For development purposes design can therefore be located as part of the production-consumption sphere and as a linking factor between different sectors of society. In general, despite the aims of design theory, design contributes to the dominant social structures by reproducing production-consumer relationships. Although some successes have been observed in alternative consumerism, designers would have to interfere more directly with production processes to achieve more deeply rooted successes in development projects. Development experts on the other hand, should develop a stronger consciousness and knowledge of design and design processes in order to incorporate these networks into the design of development projects.

As the analysis of the actual functions of objects, including their cultural and ideological content has been subject of thorough scientific investigation by anthropologists and design theorists, the processual character of design is of more interest for development studies. The first step in the design process is tendentially

the same as in development cooperation – identifying the problem. The following diagram illustrates how differently a design might be depending on how the problem is approached.

Figure 7: Options for Sustainability



Source: Diagram compiled by Isis Frisch

Design theory takes this processual character of developing a good design onto a much more complex level than developmentalists. There are entire books dedicated to just this process. This aspect of design is therefore an area of great interest for any development strategy and should be researched in more depth in the near future.

6 List of Illustrations

6 List of Illustrations

7 List of Abbreviations

AIF – *Amt für Industrielle Formgestaltung* (Bureau for Industrial Design/Formbuilding)

CEO – Chief Executive Officer

DDR – *Deutsche Demokratische Republik* (see GDR)

DFD – Design for Development

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

GDR – German Democratic Republic

HDR – Human Development Report

ICSID – International Council of Societies of Industrial Design

IMF – International Monetary Fund

NGO – Non-Governmental Organisation

NID – National Institute of Design India

OECD – Organisation for Economic Cooperation and Development

R&D – Research and Development

SAL – Structural Adjustment Loan

SAP – Structural Adjustment Programme

SED – *Sozialistische Einheitspartei Deutschlands* (German Unity Party)

UK – United Kingdom

Ulmer HfG – *Ulmer Hochschule für Gestaltung* (Higher School of Design in Ulm)

UN – United Nations

UNESCO – United Nations Educational, Scientific and Cultural Organisation

UNIDO – United Nations Industrial Development Organisation

UNPFII – United Nations Permanent Forum on Indigenous Issues

VEB – *Volkseigener Betrieb* (People's owned Enterprise/Business)

7 List of Abbreviations

WB – World Bank

WCED – World Commission on Economic Development

WSSD – World Summit on Sustainable Development

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9 Appendix

9.1 Abstract

9.1.1 English Version

Design theory points out the immediate potential of design for improving the condition of human well being, making it an ideal tool for development cooperation.

The thesis shows that past experiences in design for development projects have not shown clear successes: the design approach tendentially coincided with dominant development ideologies that similarly failed on a large scale. With growing developmental problems and increasing awareness for social polarisation, environmental damage, precarious health conditions, lacking educational infrastructures and the like, there is a new surge of design projects that aim to relieve symptoms of poverty.

The examples of governmental design strategies in the GDR and in India in comparison to the currently dominant market-led design strategies highlight that, although different consumer behaviour has been achieved through design, the production processes are generally not questioned in the design process. Because of designs origin in the industrial revolution and the division of labour, it tends to reproduce the same structures and dependencies of labour as observed in the West.

Without resorting to designing appropriate technologies that strengthen current dependencies and asymmetrical relationships, design needs to tackle development issues from a deeper level. This involves interfering with the momentarily hegemonic production systems. Developmentalists at the same time need to be more aware of design and design processes to cooperate with designers in achieving common goals.

When designing development projects, design processes should be taken into consideration as innovative tools for problem solving. When using industrially

produced goods within a development project, this should be developed in close cooperation with experienced design teams.

9.1.2 German Version

Designtheorie hebt das potential der Disziplin für die Verbesserung der Lebensqualität der Menschen stark hervor und zeigt sich deshalb als nutzvolles Instrument für Entwicklungsstrategien.

Diese Arbeit zeigt jedoch auf, dass Design für Entwicklungsprojekte in der Vergangenheit meistens nur wenig Erfolg erzielten. Dominante Ideologien, die auch Entwicklungszusammenarbeit prägten, beeinflussten die Designdisziplin. Mit der wachsenden Polarisierung zwischen Arm und Reich auf einer globalen Ebene, verstärkten Umweltproblemen, katastrophale Lebens- und Gesundheitsbedingungen für viele Menschen, fehlende Infrastrukturen wie Schulen oder Zugang zu Trinkwasser, wächst auch die Aufmerksamkeit vieler Designer für diese zunehmenden Entwicklungsproblematiken. Eine Vielzahl neuerer Designprojekte die darauf abzielen die Symptome von Armut zu bekämpfen bezeugen dies.

Anhand der Beispiele DDR und Indien werden staatliche Designstrategien mit der momentan dominanten Form des Markt-Geleiteten Designs des Westens verglichen. Die Ergebnisse zeigen auf, dass die kontextuellen ideologischen Strukturen, Design und den Designprozess zum grossteil nur oberflächlich beeinflussen. Zwar gelang es vor allem in der DDR alternatives Konsumverhalten zu schaffen, doch scheiterte es sowohl dort als auch in Indien alternative Produktionssysteme und –Strukturen zu gestalten. Der historische Ursprung der Designdisziplin in der Industriellen Revolution, erscheint als Zwang zur Reproduktion der kapitalistischen Arbeitsverhältnisse und führt dazu dass Design fast ausschließlich zu den globalen Asymmetrien beiträgt anstatt sie zu beseitigen.

Ohne sich auf angepasste Technologien zu beschränken, müssen Designer sich den tiefer liegenden Ursachen von Armut widmen um tatsächlich erfolgreiche Designs zu entwickeln. Dies bedeutet auch in die hegemonialen Produktionsprozesse

einzugreifen. Entwicklungsexperten müssen gleichzeitig ein größeres Bewusstsein für Designprozesse und Design entwickeln, welches ihnen erlaubt diese in Projektplanung mit einzubeziehen.

Design kann als innovatives Instrument zur Problemlösung dienen. Sollte ein industriell produziertes Objekt eil eines Entwicklungsprojekt sein, sollte dies auch in Zusammenarbeit mit einem Designteam entworfen oder ausgewählt werden.

9 Appendix

9.2 Curriculum Vitae

Name:	**Isis Frisch**
Adresse:	Kleingasse 22/23 1030 Wien Österreich
Phone:	+43 699 106 950 99
E-Mail:	isisfrisch@gmx.at
Nationalität:	Österreicherin
Geburtsdatum:	7. Mai 1984
Geschlecht:	weiblich

Arbeitserfahrungen

Datum:	9/10/2008 – to date
Arbeitsgeber:	APA – Austrian Press Agency
Aufgaben:	Redaktionsassistenz
Datum:	01/10/2003 – 31/12/2007
Arbeitsgeber:	Team Training Austria
Aufgaben & Kompetenzen:	Planung und Ausführung von Veranstaltungen, Englisch/Deutsch Übersetzungen, graphische Arbeiten für Fotodokumentationen
Datum:	01/07/2002 – 31/12/2007
Arbeitsgeber:	Kulturspektrum
Aufgaben & Kompetenzen:	Verschiedene pädagogische Aktivitäten mit Kindern und Jugendlichen im Auftrag der Stadt Wien, Projektentwicklung und –leiterin, Organisation und Konfliktlösung
Datum:	01/11/2005 – 31/02/2006
Arbeitsgeber:	Wiener Kinder- und Jugendanwaltschaft
Aufgaben & Kompetenzen:	Planung und Ausführung einer soziologischen Studie über die Nutzung und Notwendigkeit von Jugendzentren in Wien, Evaluierung der Ergebnisse für weitere Magistratsnutzung
Datum:	01/07/2002 – 31/07/2002
Arbeitsgeber:	Verlagsgruppe News Magazin
Aufgaben:	Recherchen für Coverstory, Auswertung von Fragebögen

Datum:	1999 & 2000
Arbeitsgeber:	amnesty international Austria
Aufgaben & Kompetenzen:	“amnesty-nite” Benefiz Gala-Abend, Organisation, Eventmanagement Assistenz

Ehrenamtlich

Administrative Tätigkeiten für Caritas Austria
Charity-Sales für terre des hommes Austria
Unterstützung eines Flüchtlingslagers des Österr. Pfadfinderbundes für Betroffene aus Bosnien-Herzegowina
Englisch Unterreicht für benachteiligte Kinder

Akademischer Werdegang

Datum:	31/08/1988 – 08/06/2002
Qualifikation:	Internationales Bakkalaureat mit einem bilingualen Diplom und Österreichischer Matura Äquivalenz
Schule:	Vienna International School
Datum:	01/10/2003 – bis dato
Qualifikation:	Individuelles Diplomstudium Internationale Entwicklung und Politikwissenschaften
Schule:	Universität Wien

Sprachen

Muttersprache Deutsch
Englisch fließend in Wort und Schrift
Spanisch sehr kompetent in Wort und Schrift
Russisch Anfängerin