

HUMAN DIGNITY AND HUMAN RIGHTS: TOWARD A HUMAN-CENTERED FRAMEWORK FOR DESIGN

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ABSTRACT

Designers and design educators in many parts of the world are discussing a new framework for our discipline. This framework offers a new way of thinking about the diversity of design, encompassing the entire spectrum of work from craft to high-tech applications. The goal of this paper is to sketch the central features of this framework and discuss some of the implications for future development of the discipline in professional practice and in education. Design is rapidly maturing as a discipline. But along the path of consolidation and expansion are many tensions and uncertainties—the relation of design practice and design research, the relation of different branches of design, and the relation of different visions or philosophies of design. The idea of an "ecology of culture" offers a perspective on these tensions and a way to move forward with our collective enterprise of making design a central discipline of the next century.

As I walked on the shore of Cape Town last night to the opening ceremonies of our conference, I saw through the rain and mist a small sliver of land in the bay. Naively, I asked my host if it was part of the peninsula that extends south of the city or an island. With what, in retrospect, must have been great patience, she quietly explained that it was not "an" island, it was "the" island. I was embarrassed, but I knew immediately what she meant. I spent the rest of the evening thinking about the political prisoners who were held on Robben Island, human rights, and the irony of a conference within sight of Table Bay that seeks to explore the reshaping of South Africa by design.

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I was helped in these thoughts by the address of the Minister of Education, Dr. Kader Asmal, who opened the conference by exploring the meaning of design, the need and opportunities for design in South Africa, and, most importantly, the grounding of design in the cultural values and political principles expressed in the new South African Constitution. I have never heard a high government official anywhere in the world speak so insightfully about the new design that is emerging around us as we near the beginning of a new century. Perhaps we were all surprised by how quickly and accurately he captured the core of our discipline and turned it back to us for action. Many of his ideas are at the forward edge of our field, and some are further ahead than we are prepared to admit. For example, I believe we all recognized his significant transformation of the old design theme of "form and function" into the new design theme of "form and content." This is one of the distinguishing marks of new design thinking: not a rejection of function, but a recognition that unless designers grasp the significant content of the products they create, their work will come to little consequence or may even lead to harm in our complex world.

I was more surprised by Dr. Asmal's account of the creation—and here he deliberately and significantly used the word "design"—of the South African Constitution. He explained that after deliberation the drafters decided not to model the document on the familiar example of the United States Constitution, with an appended Bill of Rights, but rather to give central importance from the beginning to the concept of human dignity and human rights. Though he did not elaborate the broader philosophical and historical basis for this decision, it is not difficult to find. Richard McKeon, co-chair of the international committee of distinguished philosophers that conducted the preparatory study for the Universal Declaration of Human Rights, explains that the historical development and expression of our collective understanding of human

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rights has moved through three periods.¹ Civil and political rights were the focus of attention in the eighteenth century; economic and social rights were the focus in the nineteenth century; and cultural rights—formally discovered in the preparatory work for the Universal Declaration—became the focus in the twentieth century. The U.S. Constitution begins with a statement of political rights, and the Bill of Rights is a statement of civil rights protected from government interference, properly suited to the historical development of human rights in the late eighteenth century. In subsequent case law, the United States has gradually elaborated its understanding of economic and social rights as well as cultural rights. The South African Constitution begins with a statement of cultural rights, suited to the current historical period in the development of human rights. It seeks to integrate civil and political rights as well as economic and social rights in a new framework of cultural values and cultural rights, placing central emphasis on human dignity. The result for South Africa is a strong document, suited to a new beginning in new circumstances. The opening article of the Constitution, quoted by Dr. Asmal, reminded me of the Preamble of the Universal Declaration of Human Rights, which announces "recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family."

As a participant in the drafting of the Constitution, Dr. Asmal's account is both historically important and a conscientious reminder of the cultural context within which our conference takes place. However, Dr. Asmal went further, and the next step of his argument brought the room to complete silence. He made the connection between practice and ultimate purpose that is so often missing in our discussions of design, whether in South Africa, the United States, or elsewhere in the world. Design, he argued, finds its purpose and true beginnings in the values and constitutional life of a country and its peoples. Stated as a

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principle that embraces all countries in the emerging world culture of our planet, design is fundamentally grounded in human dignity and human rights.

I sensed in the audience an intuitive understanding of the correctness of this view, though the idea itself probably came as a surprise because we often think about the principles of design in a different way. We tend to discuss the principles of form and composition, the principles of aesthetics, the principles of usability, the principles of market economics and business operations, or the mechanical and technological principles that underpin products. In short, we tend to discuss the principles of the various methods that are employed in design thinking rather than the first principles of design, the principles on which our work is ultimately grounded and justified. The evidence of this is the great difficulty we have in discussing the ethical and political implications of design and the consequent difficulty we have in conducting good discussions with students who raise serious questions about the ultimate purpose and value of our various professions.

The implications of the idea that design is grounded in human dignity and human rights are enormous and deserve careful exploration beyond the scope of my comments on this occasion. I believe they will help us to better understand aspects of design that are otherwise obscured in the flood of poor or mediocre products that we find everywhere in the world. We should consider what we mean by human dignity and how all of the products that we make either succeed or fail to support and advance human dignity. And we should think carefully about the nature of human rights—the spectrum of civil and political, economic and social, and cultural rights—and how these rights are directly implicated in our work. The issues surrounding human dignity and human rights provide a new perspective for exploring the

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many moral and ethical problems that lie at the core of the design professions.

We recognize in Dr. Asmal's argument the major tenet of new design thinking: the central place of human beings in our work. In the language of our field, we call this "human-centered design." Unfortunately, we often forget the full force and meaning of the phrase and the first principle, which it expresses. This happens, for example, when we reduce our considerations of human-centered design to matters of sheer usability and when we speak merely of "user-centered design." It is true that usability plays an important role in human-centered design, but the principles that guide our work are not exhausted when we have finished our ergonomic, psychological, sociological and anthropological studies of what fits the human body and mind. Human-centered design is fundamentally an affirmation of human dignity. It is an ongoing search for what can be done to support and strengthen the dignity of human beings as they act out their lives in varied social, economic, political, and cultural circumstances.

This is why Robben Island remained in my thoughts last evening. It reminded me that the quality of design is distinguished not merely by technical skill of execution or by aesthetic vision but by the moral and intellectual purpose toward which technical and artistic skill is directed. Robben Island, site of the prison in which Nelson Mandela and others political prisoners were isolated so long from direct participation in the national life of South Africa, is another symbol of twentieth-century design gone mad when it is not grounded on an adequate first principle. It is a symbol of the wrongful use of design to shape South Africa in a system that denied the essential dignity of all human beings. Robben Island belongs with other disturbing symbols of design in the

twentieth century, such as the one that my colleague, Dennis Doordan, chillingly cites. He reminds us that the Holocaust was one of the most thoroughly designed experiences of the twentieth century, with careful attention to every obscene detail.

Dr. Asmal's argument carries an urgent message for the work of this conference. Not only is design grounded in human dignity and human rights, it is also an essential instrument for implementing and embodying the principles of the Constitution in the everyday lives of all men, women, and children. Design is not merely an adornment of cultural life but one of the practical disciplines of responsible action for bringing the high values of a country or a culture into concrete reality, allowing us to transform abstract ideas into specific manageable form. This is evident if we consider the scope of design as it affects our lives. As an instrument of cultural life, design is the way we create all of the artifacts and communications that serve human beings, meeting their needs and desires and facilitating the exchange of information and ideas that is essential for civil and political life. Furthermore, design is the way we plan and create actions, services, and all of the other humanly shaped processes of public and private life. These are the interactions and transactions that constitute the social and economic fabric of a country. Finally, design is the way we plan and create the complex wholes that provide a framework for human culture—the human systems and sub-systems that work either in congress or in conflict with nature to support human fulfillment. These range from information and communication systems, electrical power grids, and transportation systems to our managerial organizations, our public and private institutions, and even our national constitutions. This is what leads us to say that the quality of communications, artifacts, interactions, and the environments within which all of these occur is the vivid expression of national and cultural values.

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We are under no illusion that design is everything in human life, nor do we believe that individuals who specialize in one or another area of design are capable of carrying out successful work in other areas. What we do believe is that design offers a way of thinking about the world that is significant for addressing many of the problems that human beings face in contemporary culture. We believe that conscious attention to the way designers work in specialized areas of application such as communication or industrial design is relevant for work in other areas. And we believe that general access to the ways of design thinking can provide people with new tools for engaging their cultural and natural environment. As we work toward improving design thinking in each of our special areas of application, we also contribute to a more general understanding of design that others may use in ways that we cannot fully anticipate. The urgent message of Dr. Asmal is that we must get on with our work as designers in all of these areas if we are to help in sustaining the revolution that has been initiated in South Africa—and the wider revolution in human culture that is taking place around us throughout the world.

Reshaping South Africa by design

Reshaping South Africa by design is a dangerous and deliberately provocative theme, presenting us with two opposing alternatives. One alternative is the dangerous idea that South Africa—or any nation—is merely passive clay, waiting to be molded by the energy, will, and power of individual designers, guided primarily by intuition and personal opinion about the way the world should be. Perhaps the design of Brasilia is an example of this kind of vision, where a new city was carved out of remote wilderness to be the capital and working symbol of the national life of Brazil. Whether we regard the result as a success or

failure, it provides the cautionary point that reshaping a country by design can be dangerous if it simply elevates the personal vision of individual designers and neglects or ignores the circumstantial reality of people and places. Carried to an extreme, this idea is the basis of design sophistry. We have too many examples of this throughout the world.

Instead, I prefer the other alternative. I prefer to think of design not as a discipline for molding passive clay to the will of a designer—and his or her sponsor—but as a discipline of collective forethought, anticipating the possibilities for individual and collective growth that are available in any environment. I prefer, for example, the diverse projects conducted in the Brazilian city of Curitiba to the massive project of Brasilia. For me, reshaping South Africa by design means supporting the value of human beings interacting with other human beings and discovering new kinds of interactions among people and their cultural and natural environment, with a goal of enhancing human dignity and supporting human rights. This work requires more than intuition and personal opinions about what is best. It requires knowledge of the significant content of products and a willingness to work together with all of the stakeholders in an enterprise. It requires that we take good care of each other as we work toward common goals that benefit everyone.

A NEW FRAMEWORK FOR DESIGN

Our task is to use the principles of human-centered design to build a new framework for design practice, design education, and design research in South Africa. At the outset, however, we should recognize that the problems of design in South Africa, while different in important ways, are closely related to the problems of design in many other parts

of the world, including the United States. Understanding design in South Africa offers an important perspective on design everywhere.

Here are some of the ways in which I see our situations as similar, viewed from the perspective of the condition of design and then from the perspective of the communities that we serve. Design today is fragmented in many ways that are not suited to the new circumstances and challenges that we face. It is fragmented into discrete disciplines and professions that, in contemporary practice, share many features in common and increasingly must work together to address complex new design problems. It is fragmented in institutional expression in our schools, often divided into small enclaves of technical specialization that wastefully duplicate activities and resources and fail to provide the integrative knowledge of history, business practices, economics, technology, design theory, and other subjects that could prepare students to be innovative in the new environment of design practice. It is fragmented in purpose, torn between traditional ideas about craft and artifact design and new concepts of information design, interaction design, product development, entrepreneurship, and the design of human environments. In short, design is in a troubling condition. There is an urgent need to rethink our field if we are to take on the role that Dr. Asmal has proposed for designers.

With regard to the communities that we seek to serve, I have also found surprising similarities between the problems that are faced in South Africa and the United States. For example, both of our countries are sharply divided in the distribution of wealth. The distance between the rich and poor in the United States may seem slight compared to the circumstances faced in South Africa, but the distance between those who have and those who have not should concern all designers in both of our countries as they decide where to direct their talents. Similarly,

both of our countries display incredible cultural diversity. To an outside observer—particularly looking through the lens of mass media—it may appear that American culture is a monolith and, in turn, that South Africa is a simple polarity of white and black cultures. But when we get past the media stereotypes of our countries, the picture is far more complex. For example, it is true that American culture is distinctive in many ways that make it appear monolithic; but there is also a great pluralism of cultures in the United States—far more than appears to a casual observer from a distance. Cultural diversity is clearly one of our great resources in the United States, but it is also a source of ongoing confusion and conflict that we continue to explore in all aspects of design. Similarly, it is now apparent to me that cultural diversity is one of the hallmarks of South Africa, recognized by many South Africans as a great resource for the future and now increasingly explored by the design community. Of course, both of our countries face a variety of other problems in common. These include a culture of consumption that threatens to displace traditional human values, a culture of adult preoccupations that too often denies the special needs and rights of children and of elders, an educational system that is slow to adapt to new needs and opportunities, and a corporate culture that, even in the face of global economic competition, still does not adequately recognize the importance of design.

These are some of the features of our situations that we share in common, but there are also special circumstances of design in South Africa. While we could describe these in a variety of ways, it is important to focus on the issue of economic development, since proper understanding of the role of design in economic development in South Africa is a lynchpin for reshaping design education and design research—with implications for design in many other countries. For this purpose I would like to present some personal observations, recognizing

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the limitations of experience and understanding that they may reflect but also hoping that an outside perspective may reveal patterns that are significant for building the new framework that is needed.

I expected to find that craft plays an important role in design and design education in South Africa, and, indeed, it does. It is evident in almost every educational program that I have visited. What I did not expect to find is so many leaders in the design community who understand the complex role of craft in economic development. They understand, for example, that a revitalization of craft is important for many reasons in South Africa. It provides employment in depressed areas. It enhances the skills and disciplines of work. It strengthens the cultural foundations of "making" or production. It restores cultural traditions and diverse cultural expression. It reveals diverse "voices" in the developing unity of South African culture. In short, the revitalization of craft enhances human dignity and contributes to the fulfillment of human rights—civil, economic, and cultural.

Equally important, however, they also understand that craft alone is not adequate for national survival in a complex global economy. For example, craft is an extremely expensive, labor intensive method of manufacturing, justifiable only when there is a large population that needs employment or when there is a market for expensive unique products. Craft cannot provide many of the kinds of standardized products that are generally needed for health and well being. Craft cannot meet the need for general distribution of essential products among a large population, since the one-off and serial production methods of craft yield only a small number of products. Moreover, craft typically provides for export to international markets only products that are considered exotic novelties, items that are on the fringe of economic exchange. These and many other reasons point to the

limitations of craft and the need to explore a new relationship with the design disciplines. Craft can have an intimate and vital connection with new design thinking, provided that the nature of craft and the role of design are well conceived. We will have more to say on this point, but for now it is enough to observe that wise design thinking will contribute in two ways. First, it will discover ways to improve craftwork through innovation in materials and processes. Second, it will discover among the explorations of craft those products and elements of products that may contribute to industrialization and mass production. There are, of course, many dangers involved in industrialization. But the alternative of a purely or primarily craft-oriented economy is worse.

The key to craft revitalization and a new creative relationship with design lies in an idea that I first learned from my colleague, Dennis Doordan. Properly understood, craft is not the repository of traditional form; it is the repository of indigenous cultural knowledge. This idea is well understood in South Africa, and this is one of the learnings that I will take back with me to share with colleagues in the United States and elsewhere. Unlike other countries where craft is sometimes understood as the repository of static traditional forms, craft in South Africa is typically innovative and evolving. Efforts at craft revitalization are not directed toward the past but toward the future. However, in addition to innovation within the traditions of craft, I have also found evidence that the revitalization of craft serves to bring forward indigenous cultural knowledge that can have strong impact on design and industrialization. I am referring not simply to visual motifs and external forms but to the knowledge of human beings, human behavior, and human values in social interaction. This is already evident in aspects of graphic and communication design, and it is perhaps even more evident in aspects of industrial design.

Unfortunately, there are very few South African educational programs in industrial design, and those that do exist are struggling in the face of difficult economic constraints, neglect by industry, and, to be candid, some old ideas about the nature of industrial design. Given the size of South Africa and the opportunities for new product development, the number of industrial design programs should be doubled or tripled within next ten years—and even this may not be adequate to meet the need. This may seem like a surprising or even radical idea, but it is well to remember that in new design thinking, the discipline of industrial design has wider application than is commonly understood. When the ideas and methods of industrial design are integrated with the new ideas of information design, interaction design, and environmental design, the widened scope of such programs becomes more apparent, as does their value for the social and economic development of the country. Industrial design is the key discipline for new product development, whether in areas of low, middle, or high technology. Many of our colleagues in engineering and the natural sciences may be uncomfortable with this idea, since their contributions are also essential for the creation of successful products. Nonetheless, industrial design and the related design disciplines are critical for realizing the whole product that must come to market. The whole product—what we may also call the “total product”—is the product that is fully realized in all of its effective and affective dimensions. The whole product is distinct from the many “partial products” that typically emerge from corporations that are dominated by engineering or computer science—where technological reasoning is not properly balanced by the other factors that influence the success of products in the marketplace and in society. Other countries throughout the world have begun to establish strong policies for the development of industrial design. How long will it take for those who shape national policy in research to realize that design research—covering a wide

range of subjects but particularly building toward design research into the development of new products—should have equal national priority with engineering and scientific research? Why should South Africa miss the opportunity to establish a unique place of leadership in many aspects of new product development?

What I have sketched thus far is my personal understanding of the special circumstance of craft in South Africa and the role of graphic and industrial design for bringing indigenous cultural knowledge to new product development and industrialization. I hope my understanding matches the understanding of colleagues in the South African design community, and I hope that my remarks simply adds momentum to the beginnings of change that I have seen in design education. However, I would like to go further in describing what I see as the special circumstances of design in South Africa and the special opportunities for new development through practice, education, and research.

For this purpose, we should take a moment to recognize what it means to expand design from its traditional focus on communications and artifacts to a new focus that includes interactions and environments. The design of interactions and environments is a new aspect of our field, unfamiliar to many people who were educated in the traditional disciplines of graphic and industrial design. For example, some of our colleagues were surprised and puzzled to learn that I was invited by the Commissioner of Taxation to deliver a seminar on new design thinking for some of the leaders of the South African Revenue Service in Pretoria. Frankly, there is similar surprise among colleagues in Australia and the United States when I explain how I am participating in the massive project to redesign the entire Australian taxation system on human-centered design principles, using progressive concepts and methodologies from the new disciplines of interaction design. In both

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cases, my presentations are not directed to the design of tax forms or computer information systems, though these are certainly familiar aspects of the taxation system that could benefit from the application of new design thinking. Instead, my presentations focus on how new design thinking can be applied to the design of the entire system of taxation, with special attention to the pathways that individuals must experience in journeys through such a system. The ideas and examples I discuss are drawn from industrial design, graphic and communication design, and information design, but they are integrated within the new concepts and methods of interaction design. Without doubt, the use of design to rethink the human-centered focus of any government service—or the design of services and other activities in business and industry—is a highly unusual extension of design, as we have known it. Yet, this is an important aspect of the new design thinking toward which Dr. Asmal has pointed, and it is the kind of work toward which some designers are beginning to direct serious attention.

Interaction design is an emerging area of design practice that has significant implications for South Africa. Unfortunately, educational programs in South Africa, the United States, and elsewhere in the world are slow to realize the opportunity to bring design thinking into this new area of application. Nonetheless, I have seen at least two educational programs in South Africa that—in quite different ways—have made important changes toward new design thinking. One is an important program in information design and interaction design; the other is a reconstruction of undergraduate education in graphic and communication design with strong roots in cultural diversity. But I have seen many other programs that are now preparing for change, exploring new ideas and new reorganizations of effort. In addition, I have seen at least half a dozen projects, even in my short visit, that represent important innovations in design thinking. I believe they are

representative of some of the leading design projects in the world today.

However, I hope no one will imagine that I am suggesting a shift toward high technology or digital products as the focus of design education. While interaction design has important applications in the development of digital products—there are many examples of high technology research and development in South Africa and there is a need to explore digital technology in design education programs throughout the country—interaction design is not fundamentally concerned with digital products. Interaction design is fundamentally concerned with how people relate to other people, sometimes through the mediating influence of digital products but more often through other kinds of products. One of the best examples of this is a project led by Kate Wells, from ML Sultan Technikon. It is the "Rural Crafts and HIV Aids Awareness Project, KwaZulu Natal: A Partnership in Rural Women's Development."² For some people, this work may appear to be a simple craft revitalization project. It is not. It is a sophisticated interaction design project that goes well beyond the crafting of artifacts. It is well suited to a special cultural environment and to a pressing social and cultural problem that requires sustained discussion and human interaction if it is to become manageable. The craft artifacts are only a stimulus to the real design product sought in this project, the interaction of people discussing the issue of AIDS in a social environment that otherwise forbids such discussion.

Such projects deserve close attention by the design community, and they must be well articulated so that the new learning may be shared in South Africa and with the rest of the world. This is a responsibility of design research—to publicly disseminate the results of work through publications and exhibition. As a colleague at ML Sultan Technikon

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and the University of Natal explained during a discussion period last week, it is not enough simply to do the work or even to exhibit the resulting artifacts. Proper dissemination means explaining clearly what the innovations have been, what new concepts and methods have been employed, and what the results have been.

This is the spectrum of design that I believe is shaped within the special circumstances of South Africa. It begins in the vital role of craft, moves into the work of graphic, communication and industrial design, and extends in concrete ways to new opportunities for information and interaction design and the design of human environments and systems. However, I want to add a special note on the role of the fine arts in this context. Like many countries, South Africa continues to explore the close relationship between design and the fine arts. Indeed, most design programs are still embedded in art and design faculties within colleges and other institutions. It is important to recognize that the historical origins of this alliance lie in European institutions, where design was for so long denied the status of significant learning and where design was typically subordinated to the fine or so-called "higher" arts. This relationship has changed dramatically in recent years in many countries as designers and artists have come to understand the distinct identity of design as a discipline of thinking and of practical service to human beings. For example, many art and design colleges in the United States are beginning to recognize the independent identity of design and are beginning to reorganize with this in mind. But the growing independence of design does not harm our appreciation of the place of the fine arts in cultural life and does not diminish the importance of the fine arts for design thinking. Instead, it makes possible a better relationship when neither side of the partnership feels that it must defend its value and identity against the claims and successes of the other. My hope is that we recognize the special

challenge faced by design in South Africa at this moment in its history and work quickly to strengthen its vision and mission. The fine arts and design will both benefit.

THREE CONCEPTS FOR A NEW FRAMEWORK

What are the concepts of human-centered design that could help us to understand the scope of design within the special circumstances of existing and emerging practice in South Africa that we have discussed? I believe there are three concepts whose discussion could make a significant contribution to building a new framework for design. They concern the definition of design, the nature and quality of products in new design thinking, and the ecology of culture.

Definition of Design.

Any effort to establish a new framework for design must face the challenge of definition. Unfortunately, the design community has often foundered on the problem of definition. The reason is a misunderstanding about the nature and function of definitions in the development of a discipline or a field. If history is any guide, definitions do not settle matters once and for all—nor should they. Definitions serve tactical and strategic purposes in our thinking. They focus attention on one or another aspect of a subject and enable exploration to go forward in a particular direction for a time.

There are two kinds of definition in the design community—descriptive and formal—and both are important. Descriptive definitions tend to identify a single cause of design and elevate its importance for our attention. I have found that every designer has such a definition ready at hand and is willing to present and defend it against all comers. Indeed, I have already presented a descriptive definition of my own,

earlier in this paper. I suggested that "design is a discipline of collective forethought." Whether one agrees with this definition, I hope it cast some light on our work—particularly in the tactical context in which it was presented. There are so many descriptive definitions of design that it is no wonder we have had a difficult time explaining to others what our field—as opposed to our individual work—is really about. Some of my favorite descriptive definitions at the moment are these. "Design is the humanizing of technology," proposed by Augusto Morello, President of the International Council of Societies of Industrial Design (ICSID). "Design is making things right," proposed by Ralph Caplan, who shrewdly suggests both technical and moral correctness in our work. And here is a metaphoric definition that I also like: "Design is the glimmer in God's eye," offered by an individual who remains anonymous. There are, of course, more metaphoric descriptive definitions of design than we can count, and I find them all interesting and useful.

However, it is difficult to build an inclusive framework for design on descriptive definitions. Whichever definition is chosen may sound good for the moment, but it tends to diminish the value of other definitions and doesn't allow for growth and changing directions of exploration. I prefer a formal definition, though formal definitions are seldom as vivid and interesting on first consideration. The advantage of a formal definition is that it provides strategic understanding, based on a functional relationship of several fundamental causes of a complex subject such as design. In short, it leaves open creative space for many approaches to design while explaining the deeper contribution that each approach makes toward developing the subject. Here is the formal definition that I have used to help me make sense of the diverse approaches to design that I have encountered over the years. "Design is the creative human power to conceive, plan and realize products

that serve human beings in the accomplishment of their individual and collective purposes." I would like to explain this definition in a little more detail, since I believe its value—or the value of any formal definition we may create as the basis for a new framework for design—lies in the connections it makes possible among different approaches to our subject.

For me, "creative human power" embraces the many descriptive definitions that place emphasis on creativity and the vision of the individual designer. Individual creativity is certainly an important aspect of design. In turn, "conceive, plan and realize products" embraces the many descriptive definitions of design that place great emphasis on process and method, since it identifies the final outcome of each phase of the design process—we must conceive new ideas, plan their development in products, and then make those products in concrete form. The next clause, "that serve human beings," embraces the all of the descriptive definitions that emphasize the formal qualities of products and their impact on human beings. One aspect of this clause is that it focuses on service to human beings rather than self-expression. It places aesthetic qualities in balance with qualities of usability and qualities of technological rigor and intellectual or informational content.

Finally, the clause "in the accomplishment of their individual and collective purposes" embraces, for me, the many descriptive definitions that seek to distinguish the branches of design by areas of application or by the types of products that designers create. We must be cautious in such descriptive material definitions, since they often entrap our thinking about the scope of design. For example, we may imagine that definitions of graphic design—the design of printed materials—adequately address the scope of a branch of design thinking, without

recognizing that such a fixed scope does not at all reveal other emerging areas where the concepts of graphic design may be applied. Such definitions are a particularly good example of the tactical nature of some definitions. Definitions of "graphic design" have, indeed, served the field of design for a time, but they have broken down in recent years as "graphic designers" have been employed in many new areas, including computer interface and information and interaction design. This is why so many "graphic design" programs around the world have been renamed as "visual communication" programs and, more recently, as "communication design" programs. These designers are not concerned, fundamentally, with printed matter. They are concerned with the communication of information—whether in print, in sound, in images and text, in physical artifacts, and on the screen.

It would be tragic if discussions about a new framework for design broke down over definitional issues. Whether my formal definition is useful in your work, I hope that by distinguishing the four areas of design thinking—creativity, process, product form, and the human applications and uses of products—I have suggested a way to explore the diversity and relationship of the many visions that make up design today. A suitable formal definition does not eliminate diversity. It provides a framework for understanding the different contributions that each of us may make to the larger enterprise of design. To be of one mind in a vision of design is not to be of one opinion in its expression and exploration. We may share a common vision of design but hold different opinions about how it may be developed and practiced.

As a practical matter, it would be useful to build a concept map of design in South Africa. A matrix map with a small number of variables may reveal the collective strength of approaches in South African

design. Done well, such a map may move discussions past disputes about descriptive definitions and toward a collective understanding of how each individual or group contributes to the whole enterprise. In the best outcome, such a map would also suggest areas of common research interest for further development.

Nature of Products.

A new framework for design should also be based on a clear idea about the nature of the diverse products that designers create. Among the general public, a product is simply an artifact. It is a physical entity, usually associated with industrial design. However, this is an outdated idea that no longer matches our understanding of design. Indeed, it often hinders the work of design. Properly understood, a product is the immediate outcome of design, whether that outcome is a tangible artifact or something intangible. The product is an offer of experience. It is not an experience in itself; it assembles the materials and possibilities that a human being may turn into a personal experience. Where there is something tangible, the physical artifact is only the carrier of a more important intangible product. This is evident in the area of graphic and communication design, where we have gradually come to understand that what appears on the printed page, while certainly designed, is only part of the communication that the designer seeks to create. The product is the communication itself, which is an engagement with the viewer that induces him or her to consider the information that is presented and reach a personal decision—a judgment—about the subject that is presented. Admittedly, it has been much easier for graphic designers to regard the printed page as their product rather than a communicative engagement with the viewer. The restricted idea of product allows designers to judge their work by narrow formal and technical criteria, avoiding the deeper problem of evaluating the effectiveness of their work. Unfortunately, popular design magazines

are filled with technically correct, interesting, innovative, and sometimes exciting visual displays whose real effectiveness in achieving communication to solve a real design problem is never discussed or evaluated.

When we expand the meaning of the term "product" from a physical artifact to an engagement with human beings, the diverse branches of design become clearer, revealing the logical pattern of how designers explore the human-made world. We have already suggested the core product of graphic design, visual communication, and communication design: an engagement that induces a viewer to consider information and reach a personal decision about the subject that is presented. The diverse forms of communication design depend on whether the judgment is oriented toward the past, present, or future. In contrast to such products, there are also products that are easily recognized in the traditional practices of industrial design and engineering. What is added to the understanding of the physical artifact in traditional industrial design is awareness of how products perform in the experience of human beings. This is the direction of new thinking in industrial design, where the behavioral and social sciences—and particularly anthropology—have helped to change our notion of form from something static to something dynamic and culturally situated. Finally, there are the two new areas of products that I have already mentioned: interactions and environments. We have been slow to recognize that services, processes, and other planned activities are also products. However, important beginnings have been made in this direction and we would do well to include in any new framework of design the area of "action," including such examples as services and processes. Both communication design and industrial design can contribute to the exploration of interaction design, but this requires a new perspective and a new orientation of traditional thinking. I will say

little about the area of human environments and systems, except to suggest that designers are now exploring some of the most unusual problems of our field around issues of cultural value and human experience. Indeed, two of the most interesting projects I have found in South Africa are in this area. Their hallmark is a problem of integrating the contributions of many design disciplines within a collective vision of an environmental whole, organized around a unifying idea or value.

The central idea I want to present is that new design thinking now embraces both an external and an internal perspective on the nature of products. In traditional design, the product is regarded primarily from an external perspective. We discuss form and function, materials, and the manner of designing, producing, using, and disposing. In new design thinking we are mindful of those important considerations, but we also attempt to understand products from an internal perspective of performance, asking what is the experience of the human being that uses a product? For this reason, some new terms have entered design—and along with them, new concepts and methods.

This is most evident in the area of form. Viewed from an external perspective, form is often understood as shape or physical configuration. We ask, is the form suited to the function that the product must fulfill? Viewed from an internal perspective—inside the experience of human beings—form changes from a concept of static shape to a concept of dynamic process and performance. Dynamic form—the form of a product as it is experienced by a human being—has three distinctive qualities. First, it must be useful in performance. To be useful, the product must incorporate appropriate and well considered “content” that is properly “structured.” In some cases, this involves technological reasoning, but in other cases it may involve an emphasis on accurate informational content and a structure of logical

understanding. In addition, we expect products to be usable in performance. To be usable, the product must fit both the human hand and the human mind, matching the limitations of human beings with suitable "affordances" to action and control. Finally, a product must be desirable. To be desirable, the product must speak to us in a "voice" with which we can identify, finding comfort, trust, and some measure of surprise and delight.

There is, of course, a final quality of form. It must be appropriate to the situation of use. When I was a schoolboy, the idea of propriety was anathema to me. The word stood for all that was conventional in the social world around me. As I grew older, however, I gradually came to see that what is appropriate in life is sometimes revolutionary, and what is inappropriate is sometimes the very conventionalities and injustices that appalled me as a boy. In the context of design, I have come to understand that propriety or what is appropriate takes two forms. First, propriety is the proper mixture of emphasis on what is useful, usable, and desirable in a product. The balance changes significantly when we consider, for example, the form of a medical instrument and the form of an item of high fashion clothing or jewelry. I hope that students and colleagues will consider the changing proportions of useful, usable and desirable in a wide range of products and investigate how these distinctions provide a framework for understanding the differences among all types of products. Second, propriety is the ultimate grounding of product form in the social and cultural situation of use. This aspect of propriety is illuminated by Dr. Asmal's discussion and by our understanding that the ultimate purpose of design is to enhance human dignity and support human rights. We can design products with technical precision so that they are efficient and effective in their performance, but there are some products that we should not design—

and we must be conscious of the grounds upon which we must make those ultimate decisions.

While it is important to distinguish the physical carrier of a design from the design product that we seek to create in human experience, it is also important to distinguish the product that we seek to create for human experience from the ultimate result of the product that we intend or hope will occur. This may appear to be a subtle distinction, but I believe it is critical in our field and often overlooked. My example again comes from the area of graphic design. If we design a poster to advertise an event, the design product is the communicative engagement we establish with a viewer that presents information clearly and offers the reasons for attending the event. If we do that job well, we leave for the viewer the right to decide whether to attend the event. I believe this is what it means to put design to the service of human dignity. The task of design is not to force or manipulate a viewer to reach a decision that we hope will take place. The task of design is to make the best presentation of information and reasons for a course of action so that a viewer can make the decision that is best for him or her. An example from industrial design perhaps makes the point as well. When we design a garden tool or a household machine, the physical product is only part of the design. The physical artifact carries a more important intangible design product. It carries an engagement with the human being who decides to use the product, incorporating information about control and operation as well as other reasons that allow a person to decide whether to purchase and employ the object. If designers do the job well, we leave for the user the right to decide whether and how to use the object.

What I am suggesting, therefore, is that the nature of products is far richer than we have been able to articulate in the past. Products

Human Dignity and Human Rights: Towards a Human-centred Framework for Design

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should not be entirely reduced to their physical carriers, nor should they be entirely assimilated to the ultimate result that comes from their use. There is an important range of decisions that designers must reach, with a gradually expanding horizon of implications. This is the check and balance of design thinking. All of the products of design are offers of experience. If we have designed well, then our offers sustain and enhance human dignity. If we are given the opportunity to design a product that, in the quiet of our soul, we believe will diminish human dignity and diminish human rights, then our responsibility as designers is clear. While we may design such a product that meets technical standards of quality, it is a product that we should avoid.

Ecology of Culture.

Any effort to build a new framework for design will inevitably founder unless it embraces the pluralism of approaches that we find throughout the design community. At best it will be the framework of a school of design thinking rather than a wide design community. Schools of design are certainly important, but our task is to build a framework that embraces and encourages a variety of schools for the collective well being of our field. We have already discussed this in the context of definitions of design, suggesting that there are many useful definitions and that we are not required to build the house of design on a single definition. But the concept of the ecology of culture—whether we are talking about design culture or the broader culture that surrounds design—should be recognized and understood in its own right. To me, the ecology of culture is the inescapable reality of our lives. It is the interdependence and interrelation of all of our diverse perspectives on knowing, doing, and making in all areas of human activity.³ The ecology of design culture is an expression of the wider idea.

No advance in design practice or design theory stands entirely on its own. Even when a new vision or practice is presented that contrasts with or contradicts the dominant culture of a time and place, the new ideas owe something to alternative and opposing ideas. What this suggests is the need for strong design history, criticism and theory—the modes of inquiry that cultivate our understanding and appreciation of design in all of its conceptual and practical forms. A framework for the advancement of design should include recognition of the importance of design research, including history, criticism, and theory. This will foster the ecology of design culture and keep alive the genetic pluralism of ideas and methods that we need for future development.

DESIGN EDUCATION AND DESIGN RESEARCH

Whatever design framework—formal or informal—emerges in South Africa, it will be conditioned by the accomplishments of the past as well as the opportunities of the future. With regard to the past, I have found many examples of older forms of design thinking in education and in the organization of educational programs. Some are understandable to me and others are not. However, the system is clearly undergoing significant change and in a few years it may not be entirely recognizable by former standards and expectations. Already there are significant changes and a variety of new visions. I will not report here on the details of what I have seen and begun to understand. I do want to note the special efforts to develop design education among children in elementary, middle, and high school. I believe these efforts are of vital importance for the future, because bringing design awareness and confidence to the future general public serves the ends suggested by Dr. Asmal. I also want to note the efforts to bring design into community colleges. Again, this serves the goal of making design a discipline of learning for everyone, whatever their career destination,

and it creates awareness that could lead some students to study design further for professional employment.

If these efforts are to succeed, they will require excellence of design education in colleges and universities. Such programs will prepare new teachers for early education and strengthen the avenues to professional practice. Of special importance, I believe, is the transformation of the technikons into universities. The implications of this change in status and vision are perhaps more significant for the development of design than we fully realize. In fact, it is a trend of design education around the world to move into universities. However, design in a university context is different from design in other institutional contexts—though we may be slow to develop all of the opportunities and quick to succumb to some of the temptations and pressures.⁴ There is danger for design if the practical and productive focus of our work is assimilated thoughtlessly into the theoretical focus that is common in traditional university culture. Design educators will have to develop strong arguments about the nature of their discipline and its value among traditional fields of learning. Design knowledge is not yet well recognized in universities around the world, though new programs of doctoral education should ultimately help to provide some of the evidence that is needed. Our bigger challenge is to explain why design is different from other “subject-based” disciplines, how it integrates knowledge from many other disciplines, and how it turns theoretical understanding in other disciplines into valuable products that have can have great impact on society. This is both a challenge and an opportunity for design educators, if we are wise in our efforts and do not lose the core strength of concrete making that distinguishes our discipline from disciplines that are primarily oriented toward theory or practice.

One feature of the new environment of design and design education is the need for research. While this is part of the expectation that comes with university culture, it is also a mission of our field. We have already discussed the need to disseminate the results of design work—not merely to exhibit artifacts but to explain the innovations, ideas and methods, and results of work. It does no good to our discipline to ignore this responsibility just because there are no formal institutional requirements in this area. To become a strong field, we have to consolidate and build our understanding of design in a way that seldom took place in the past.

It is for this reason that we should understand the kinds of design research that are possible and consider some of the general directions for research that seem to present themselves. Designers have tended to think of research as a single activity when, in fact, it takes many forms. Gathering information is certainly one kind of research, as is exploratory work in designing products. These we can understand and continue to develop. But should also recognize a valuable distinction among kinds of research that our colleagues in other fields routinely employ. This is a distinction among clinical, applied, and basic research.⁵ Clinical research simply refers to design work that is directed toward individual cases; applied research is directed toward problems in a class of products that encompasses many individual cases; and basic research is directed toward the investigation fundamental problems in understanding the general principles and causes of design. I believe that these distinctions will help in our efforts to explain design research to our colleagues in other fields and to those who are responsible for setting policy in research funding organizations.

With regard to opportunities for design research, I have found four general themes that connect what has already been accomplished

with possibilities for the future. These themes are not framed within the separate branches of design. Instead, they suggest interdisciplinary issues that are shared by many branches.

1. The first theme lies in the area of communication and information design. While design for print remains an important area for exploration, there are opportunities to break out of traditional delivery vehicles and consider the many other ways that information is or can be communicated in South Africa. This is an interdisciplinary theme that connects graphic design with most of the other areas of design and craft. It would be useful for education and new design practice to explore the common ground of the various branches of design in shaping and delivering information.

In addition, many people have expressed uncertainty about the true identity of South Africa in its new cultural and political circumstances. To me, the cultivation of individual voices is what leads to national identity. Identity is not something imposed collectively on a country or a region, it is something discovered through individual work. Craft and the fine arts have always been an important source of "voice" in communication, whether the voice is anonymous or personally attributed. Exploration of the "voices" of South African design may help to reveal what it is that makes South African products uniquely "desirable."

2. The second theme lies in the area of industrial design, broadly conceived in its application to traditional and new products. Research is needed to explore new product development in South Africa and the opportunities to encourage entrepreneurship. This means building new alliances among colleagues in engineering, computer science, business and the social sciences in South Africa so that the quality of products is

improved and time-to-market is shortened. I am not surprised to learn that industry in South Africa is still dominated by engineering. The same is true in most parts of the world. But research and development projects can demonstrate the advantages of design for integrating knowledge from many disciplines and turning that knowledge toward concrete products that are more successful in the marketplace. This means discovering new product opportunities as well as providing clinical services to analyze and improve the quality of existing products. There is already significant work in this area in other parts of the world that can serve as a model for efforts in South Africa, but there are special opportunities for research in this country that could have international significance.

There are already important efforts to improve craft practices, focused on improving processes and experimenting with new materials. Interestingly, these efforts are not found only or even primarily in the industrial design programs that I have visited. What this suggests to me is an opportunity for industrial designers to build new connections with colleagues in other branches of design and the crafts—for example, in textiles, ceramics, and jewelry. Connections with architecture may also be potentially significant in the industrialization of certain aspects of housing.

3. The third theme lies in the area of what I have called interaction design, including the design of services, processes, and other structured activities. The beginnings of this are already evident in an excellent program in information design at the University of Pretoria and in some of the projects I have found elsewhere. But this is such a new area of work that projects are often described in surprisingly traditional terms, often failing to highlight the significant innovations in concept and method that at the core. In general, it may be useful to convene a special conference to

discuss how design can contribute to exploring interactions among individuals and communities in South Africa. Such a conference may begin to identify issues for research and collaboration with others who also have significant interest in designing for human interaction.

4. The fourth theme lies in the area of environments and human systems. We are well aware that architecture, urban planning, and civil engineering have long regarded this as the domain of their work. However, in the new circumstances of contemporary life it may be valuable to reconsider the nature of environments and investigate how other branches of design are affected by and can contribute to shaping human environments for living, working, playing and learning. Unfortunately, we too often think of human environments simply as physical places rather than as places of interaction, information, and knowledge—as cultural places. And, particularly, we have neglected any systematic investigation of the role of culture in providing the pervasive matrix ideas and values that define the core of designed environments. It may be useful to convene a conference to explore the concepts of “culture,” “environment” and “human systems” in the new South Africa, with the goal of discovering how far these concepts have already been carried in the work of a wide range of design professions. This fits within an emerging concern around the world for new ideas about the relationship between design and culture, and such a conference could have both national and international impact as we begin to open up this domain of problems for research and new design practice.

CONCLUSION

When I presented some of these ideas in more detail at a meeting of government administrators earlier in my visit to South Africa, I suddenly saw smiles from many faces around the room. Thinking that I had failed to explain clearly enough to turn these ideas into practical possibilities, I paused and asked for help in understanding the reaction of the group. The leader assured me that his colleagues were not laughing at me. They were smiling because I had unknowingly expressed the meaning of "ubuntu" in South African culture. "Ubuntu," he explained, is a central value in the new South African culture, found in design and many other aspects of life. Literally, it means shaking hands, but metaphorically it means taking care of each other. They had found in my presentation of human-centered design an unexpected coherence of the idea of "ubuntu," shaped in a new discipline of design thinking that could be applied to their work. It appears that I have traveled a long way to discover that we share common ground. For me, it was a moment of significant learning.

Notes

¹ Richard McKeon, "Philosophy and History in the Development of Human Rights," in **Freedom and History and Other Essays: An Introduction to the Thought of Richard McKeon**, ed. by Zahava K. McKeon (Chicago: University of Chicago Press, 1990).

² Kate Wells, "Design Messages: Rural Crafts + HIV/AIDS Awareness Project KZN 2000," in the Proceedings of the Conference on Reshaping South Africa by Design, Cape Town, 2000.

³ Richard Buchanan, "Children of the Moving Present: The Ecology of Culture and the Search for Causes in Design," **Design Issues**, Vol. XVII, No. 1 (Winter, 2001).

⁴ Richard Buchanan, "The Problem of Character in Design Education: Liberal Arts and Professional Specialization," **International Journal of Technology and Design Education**, December, 2000.

⁵ Richard Buchanan, "Design Research and the New Learning: Interaction Design and New Product Development," **Design Issues**, Vol. XVII, No. 2 (Spring, 2001).