→

David SLESS is Director of the Communication Research Institute, a not-for-profit body that undertakes research and provides information design services and advice to over 200 government and industry organizations around the world. He is also Visiting Professor of Information Design in the Design Institute at Coventry University, Vice President of the International Institute for Information Design and an Adjunct Professor at the Australian National University. An advocate for evidence-based information design, his main research has been in information design methods; he is the author of over 200 publications.

David SLESS

DESIGN OR "DESIGN"— ENVISIONING A FUTURE DESIGN EDUCATION

ABSTRACT

Challenging the common grand vision of Design, this article considers 'design' as a humble re-forming process based on evidence to substantiate its results. The designer is likened to a tinker who respects previous iterations of a design and seeks to retain what is useful while improving its performance. A design process is offered, illustrated with a real project example. The author argues for a reframing of 'design' as a sustainable, evolutionary process.

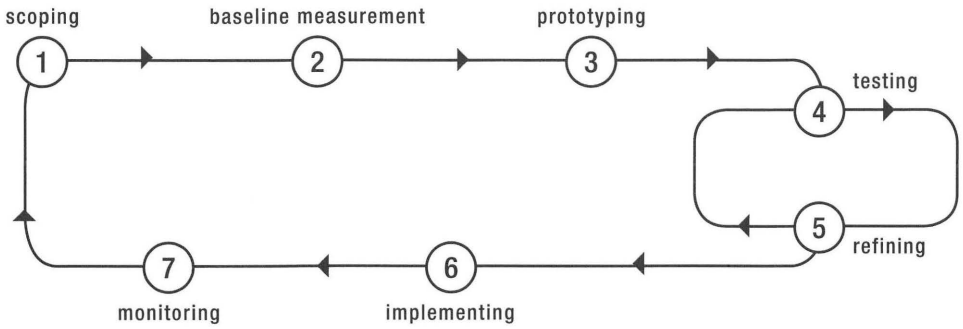
"The Design vision is both dangerous and misleading, when applied to education, as it so often is as a guiding vision. I fear it produces arrogant, ignorant and ultimately disappointed graduates..."

FOR MORE THAN THIRTY YEARS, my research team and I at the Communication Research Institute (CRI) have been examining the principles and practice of communication and design. In particular, we have developed and successfully implemented certain design methods based on a philosophy of communication and on our extensive experience with several hundred large and small organizations (commercial, not-for-profit and public) all over the world. I have noticed, however, that although some of our research findings have been adopted by some practicing designers, design education has remained more or less static for decades. I hope that my paper will help change this sad situation.

FIGURE 1 is one of the outcomes of the research program into communication and information design methods conducted at CRI between 1985 and 2012 (*Sless, 2002*). It may be relevant to design in other fields, but I would defer to specialists in other areas of design on that matter.

FIG 1.

Information design process



The process illustrated in the diagram builds on the work of earlier designers and researchers, particularly drawing on research in *Design Methods* (*Jones, 1980*) and *Communication Theory* (*Sless, 1986*), and pulls together a number of strands of thinking on user experience design, appreciative dialogue, wicked problems and the philosophy of language. It sidesteps postmodernism and much of the contemporary debate about the role of theory in design practice (*Sless, 1998*).

I have come to the view that the process described by this diagram should be at the heart of teaching future information designers. This is the framework within which we should teach the full range of technical, craft, investigative and social skills that are part of our collective and accumulated know-how and research findings in the field. However, to accomplish this—to bring about the necessary transformation in curriculum and teaching practices—will require a rethinking of the design philosophy that currently informs most teaching in communication design, or graphic design as it has been traditionally called.

Much of the detailed description of this diagram and the necessary skills that are needed in contemporary information design have been discussed elsewhere (*Sless, 2008*). I will not repeat them here. Rather I want to focus in this paper on the assumptions and worldview that inform this approach to design education. I will do so, in part, by contrasting it with the dominant view in our time.

NOT DESIGN WITH A BIG D

Though the language used to envision design has changed over the years, and different areas of design give the ideas a different inflection, the dominant dream, project, trajectory and vision of design in the 20th and 21st centuries has not changed.

The dream was long ago encapsulated by László Moholy-Nagy, writing in the 1930s:

> *Design has many connotations. It is the organization of materials and processes in the most productive, economic way, in a harmonious balance of all elements necessary for a certain function. It is not a matter of facade, of mere external appearance; rather it is the essence of products and institutions, penetrating and comprehensive. Designing is a complex and*

> *intricate task. It is the integration of technological, social and economic requirements, biological necessities, and the psychophysical effects of materials, shape, color, volume, and space: thinking in relationships (Moholy-Nagy, 1938).*

Here is both the humility and hubris of the dominant design dream in our time: humility in the face of the complexity of elements that make up our world, and hubris in the belief that through design we can successfully reshape our world and achieve a harmonious, penetrating balance comprising all the elements. This is not just a vision of design, it is a vision of Design.

I suspect that many of my colleagues, though using different language, would see this vision of an all-encompassing approach to designing systems—a harmonious, penetrating and comprehensive balance of all Moholy-Nagy's elements—as the way forward in design and design education.

For a while, I too embraced this vision, this panacea. But I now recoil from it. To understand my vision for the future of design education, I must explain why I have rejected the all-encompassing Design vision.

As a researcher, I collect evidence about the effectiveness of design. The evidence does not support the Design vision. Such ideals, dreams, visions of panaceas, are, to a limited degree, sustainable within the limits of a picture frame, a piece of paper, or a single solid object—a poster, a kettle, a building. But once we move out of this narrow frame, our capacity to create order and achieve that penetrating, harmonious balance is severely tested, if not destroyed, by two things: our own position within an already established personal and social frame of reference, and the sheer size and complexity of our world.

The idea that design can do great things, encompassing ever wider fields of interest and complexity, is implicit within the Design vision. But in what way does a designer shape the world harmoniously? Let me suggest some scenarios. In the unlikely event of a designer being invited to participate in designing a constitution for a new nation, what could constitute a design that created harmonious, penetrating and comprehensive balance and order? What about in the more likely events of being asked to design a city, a shopping complex, an advertising campaign, a website? The reality, not only of large-scale projects but even of

many smaller ones, is that they are compromises with less than fully harmonious outcomes, often over budget and over deadline, and almost never without unintended consequences. In user-centered design, where evidence is often collected on design usability, there are always less than perfect outcomes.

The Design vision is both dangerous and misleading, when applied to education, as it so often is as a guiding vision. I fear it produces arrogant, ignorant and ultimately disappointed graduates: arrogant because many will want to believe in the vision splendid and their role within it; ignorant because it starts from assumptions that are not based on any evidence (indeed, the search for evidence plays no part in Design); and disappointment, because the end result will be—well, disappointing.

From where I see design, I see no grand vision. On the contrary, I believe that most of what we designers do is tinker. We are the travelling tinkers of our time. We temporarily fix things—sometimes quite large things—and we sometimes leave them working and looking better than when they were handed to us for repair. We sometimes make new things to fill a need; a tinker can turn his hand to fashioning a lid for a lidless pot. Designers produce prostheses, sometimes very effective and beautiful ones that are much admired, but prostheses for all that.

Is what we do important? Yes, I think it is, and I do believe that we bring something unique into human endeavours, possibly vital and essentially different to other types of endeavours. But we need a much humbler starting point.

DESIGN AS RE-FORMING

Rather than the Design vision, I would suggest a different starting point, with a different purpose, different criteria of success and probably a different aesthetic. Instead of the grand transformative agenda of Design, I propose a more modest design agenda: *doing considerate and useful evidence-based work to help with gradual well-informed and sustainable improvements, taking account of those areas that we can take account of, and doing no harm.* In this vision, creativity is no longer at the center of the design enterprise, but rather to be treated as a useful part of the armory for designing information. Far more important is being mindful of all those

who have or may have an interest in valuing what has already been created.

I realize that this agenda switches off any notion of what I regard as the radical pretentions of Design to be revolutionary and transformative, and replaces it with design as a *re-forming* activity embedded within the existing social and natural systems.

In a very real sense *re-forming* designers are concerned with re-forming; taking an existing form (a design that currently exists) or generating a new design using an existing or close genus, analyzing it in depth, finding evidence for its strengths and weaknesses and using that evidence to *re-form* it into something new and hopefully better. Whether it is better or not is also a matter of evidence.

This is a sustainable evolutionary design process. It starts from the proposition that the domain in which we might wish to bring about change is already suffused with people and groups who may be interested in what already exists and who may well have an interest in what might replace it; there are always legal, technical, economic, social and environmental factors and interests to consider before we take a tentative step into the future.

In the design process described here (FIGURE 1), the designer should spend considerable effort (about a third of the project budget) at the early scoping stage, discovering the interests and constraints that exist in the problem domain. Such an effort is essential if designers are to avoid the disappointment and frustration that will inevitably follow if the scoping stage is omitted.

One of the lessons from this type of work is that there are multiple foci of interest from which to see any particular design; emphasizing one of these to the exclusion or others, especially the user in user-centered design, leads to a massive distortion of the process and outcomes. Bringing the potential users of a design into the design process, so that anything that emerges serves their interests too, is a laudable contemporary aim. But there are already many others already seated at the decision-making table. The user is just one more voice, and for some around the table, a new and strange voice to listen to and consider. Designers themselves are just another voice at the decision making table—and few designers ever occupy the chairman's seat or have a casting vote.

Whatever the fervor and commitment of the designer to the interests of the user, the reality is that those already round the table will have a powerful say in the outcome. Viewed from this perspective, and as most user-focused designers will reluctantly agree, user-centered designs fail in part or in whole because other more powerful interests prevail. Complexity apart, this is why the Design vision is unrealizable in practice. We need to proceed from a clear recognition of our own position at the table. It is time to alter the focus and avoid the disappointment. The scoping stage is therefore essential.

NOTHING IS TOTALLY NEW

No problem or its solution is totally new. However inadequate a current state of affairs may be, attempts at its amelioration have always been made, long before we as designers are invited to help. These attempts must be measured. This happens in the baseline measurement stage (FIGURE 1).

The baseline measurement is one of the ways we value, cherish and learn from the work done by others before us. It helps us to avoid wasting good work that has already been done and helps us to avoid repeating past mistakes. It also provides us with data to demonstrate, at a later stage, that our improvements have made a useful difference.

The dataset shown in FIGURE 2 below is taken from a highly successful award-winning project in which I was able to use this approach (*AGDA, 2004*). I have deliberately chosen a project that resulted in a paper output, providing a better sense of the process than is possible with digital systems such as websites, which are potentially much more complex.

The project was for Telstra, the largest Telco in the Australian market, with over 9 million customers when the project was undertaken in 2003. In 1988, I had used an earlier version of the reforming design process to develop a new bill for Telstra (then Telecom Australia) (*Sless, 1992*). The 'old bill' mentioned in FIGURE 2 was that bill, though modified over the years to accommodate new services and changing business requirements.

In 2003, Telstra wanted a new design. Before approaching me, they had instructed one of their agencies to develop a new bill, which Telstra named the 'concept' bill. At this point CRI was invited

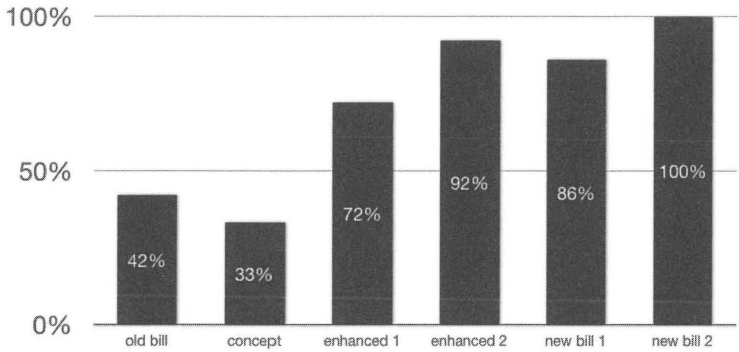


FIG 2.

Dataset collected from successive designs of telephone bill

to conduct a review of the concept bill. I suggested that we test the usability of the concept bill and compare it with the usability of their current bill (the 'old' bill). In collaboration with Telstra, we set a minimum target performance level for the bill's usability then tested it with a sample of their customers. The results showed clearly that their then current bill (the 'old bill') actually performed better than the concept bill (see the first two measurements in FIGURE 2).

These performance measurements, taken at the baseline measurement stage of the design process, crucially framed everything that followed. At this stage, about a third of the way through the project, no work had been undertaken to develop any improved or new designs.

Erring on the conservative side, Telstra asked us to improve the 'old bill.' This led to the 'enhanced 1' and 'enhanced 2' designs, which when tested, proved to perform far more effectively than the first two designs.

At this point, Telstra (and CRI) decided that an enhanced old bill dating from the 1980s would not meet their current position in the market place, so the organization asked us to develop a new bill. Because we had a substantial body of data on how people used the old bill, we were able to move rapidly to a new prototype that was then refined in one more round to give a result where all the people tested were able to use the bill at an acceptable level.

It is important to note that an acceptable level does not mean a perfect level of usability. It is also important to note how the whole process is anchored in evidence, both before and after the design was finalized and before it was implemented.

But even with all of that evidence, and a clearly described process, at least half the work undertaken to bring this project and others like it to fruition are not shown in FIGURE 1. This is the all-important political work of successfully managing the interests that come to bear on such a project. It happened in this particular case to be an internal Telstra staff member who managed this project through the labyrinthian maze of internal interests, any one of which could have derailed the project. If you added up her time as well as our own in assisting this management process, then the total of this necessary work came to about fifty percent of the total project effort. In our experience, this is fairly typical (*Sless, 2002*).

The remaining question is whether or not the design community can come together to change the current educational programs for the next generation of designers so that there are designers who can undertake this type of evidence-based, politically grounded, sustainable work (*Sless, 2011*).

Can we persuade design educators away from their heroic and romantic aspirations and give the next generation a new, more modest sensibility and practice as I have suggested? I would like to think we can, for the benefit of the students and the fragile world we inhabit.

REFERENCES

1 *AGDA. 2004. 7th Australian Graphic Design Association National Biennial Awards 2004 Compendium AGDA NSW.*

2 *Jones, C. 1992. Design Methods. New York, NY: Wiley.*

3 *Moholy-Nagy, L. 1938. The New Vision; Fundamentals of Design, Printing, Sculpture, Architecture. New York, NY: Norton.*

4 *Sless, D. 1986. In Search of Semiotics. Totowa, NJ: Barnes & Noble.*

5 *Sless, D. 1992. The telecom bill: Redesigning a computer generated report. In Penman, R. and D. Sless, editors. Designing information for people. Canberra: Communication Research Press 77-98. Also at: http://communication.org.au/publications/case-histories/the-telecom-bill--redesigning-a-computer-generated-report/58,33.html*

6 *Sless, D. 1997. Theory for practice. http://communication.org.au/publications/principles---philosophy/theory-for-practice/48,30.html?itemid=48&catid=30&cat_name=principles---philosophy&item_title=theory-for-practice. Also AIGA 2005 http://www.aiga.org/interior.aspx?pageid=44&id=2843*

7 *Sless, D. 1998. Transitions in information design. http://communication.org.au/publications/principles---philosophy/Transitions-in-information- design/88,30.html (Accessed 8 Dec 2010).*

8 *Sless, D. 2002. Experiences in Co-Designing. Keynote Address given at the Co-designing Conference, Coventry University, 13 September 2000. http://communication.org.au/publications/case-histories/experiences-in-co-designing/25,33.html*

9 *Sless, D. 2002. Director's Notes 1. http://communication.org.au/modules/wordpress/directors-notes-1/*

10 *Sless, D. 2008. Measuring information design. Information Design Journal, 16.3, 250–258.*

11 *Sless, D. 2011. Critical Reflections on a manifesto. ICOGRADA Design Education Manifesto 2011.*