INTERVIEW with Gillian Crampton Smith

In 1991 Gillian Crampton Smith found-ed the Computer Related Design Department at the Royal College of Art—a program to enable artist-designers to develop and apply their traditional skills and knowledge to the design of all kinds of interactive products and systems. Between 2001 and 2006 she was director of the brand new Interaction Design Institute Ivrea (near Turin), an institute for teaching and research funded by Telecom Italia and Olivetti, where she worked to develop connections between the disciplines of technology, design, and business. In 2006 she moved to the IUAV University of Architecture and Design in Venice to continue the work started at Ivrea.

GC: I believe that things should work but they should also delight. In the past, when it was really difficult to make things work, that was what people concentrated on. But now it's much easier to design and build software and hardware that is robust and reliable. We have an amazing range of technologies but they're often not well designed for people—and they're certainly not very enjoyable to use. If we think about other things in our life, our clothes, our furniture, the things we eat with, we choose them because they have a meaning beyond their practical use. Good design is partly about working really well, but it's also about what something looks like, what it reminds us of, what it refers to in our broader cultural environment. It's this side that interactive systems are only just beginning to address—how they can become a true part of culture. They are not just tools for professionals any more, but an environment in which we live.

HS: How do you think we can improve things?
GC: The parallel with architecture is interesting. In architecture, a great deal of time and expense is put into the initial design; with software this is rarely the case: on the whole not much money or time is put into the initial design stages. If you think of the big software engineering companies, how many people work on the design side rather than on the implementation side?

HS: When you say design do you mean conceptual design, or task design, or something else?
GC: I mean all phases of design. Firstly there's research—finding out about people, their needs and desires. This is not necessarily limited to finding out about what they want, because if we're designing new things, they are probably things people don't even know they could have. At the Royal College of Art we developed ways of working with users—to be inspired by

them, and not constrained by what they know is possible.

The second stage is thinking, "What should this thing we are designing do?" You could call this conceptual design, deciding the idea of what the product is. A third stage is thinking how do you represent it—what mental model of what it is do you want to conjure up in the mind of the user—and how do you give it form? And then the fourth stage is actually crafting the interface—exactly what color is this pixel? Is this type the right size, or do you need a size bigger? How much can you get on a screen?—all those things about the details that make the difference between something graceful or awkward.

One of the problems companies have is that the feedback they get is: "I wish it did x." Software looks as if it's designed, not with a basic model of how it works that is then expressed on the interface, but as a load of different functions that are strung together. The desktop interface, although it has great advantages, encourages the idea that you have a menu and you can just add a few more bits when people want more things. In today's word processors, for instance, there isn't a clear conceptual model about how it works, or an underlying theory people can use to reason about why it is not working in the way they expect.

HS: So in trying to put more effort into the design aspect of things, do you think we need different people in the team?
GC: Yes. People in the software field tend to think that designers are people who know how to do the pretty bits at the end which, of course, they do. But a graphic designer, for instance, is somebody who also thinks at a more strategic level, "What message needs to be communicated? and to whom?" and then, "What is the best way to give form to a message like that?" The part you see is the beautiful design, the lovely poster or record sleeve, or elegant book, but behind that is a lot of thinking about how to communicate ideas via a particular medium.

HS: If you've got people from different disciplines, have you experienced difficulties in communication?
GC: Absolutely. People from different disciplines have different values, so different results and different approaches are valued. People have different temperaments, that have led them to the different fields in the first place, and they've been trained in different ways. In my view the big difference between the way engineers are trained and the way designers are trained is that engineers are trained to focus in on a solution from the beginning whereas designers are trained first to focus out and only when they have explored a lot of different ideas to focus in. This is very hard for both the engineers and the designers because the designers are thinking the engineers are trying to home in much too quickly on a solution without considering enough alternatives; and the engineers can't bear the designers faffing about! Each is trained to get their results in a completely different way.

HS: Is your idea to make each more tolerant of the other?
GC: Yes, my idea is not to try to make renaissance people, as I don't think it's feasible. Very few people can do everything well. The ideal team is made up of people who are really confident and good at what they do and open-mined enough to realize there are very different approaches. There's the scientific approach of the HCI specialists,

the engineering approach, the design approach. All three are different and that's their value—you don't want everybody to be the same. The best combination is where you have engineers who understand and appreciate design and designers who understand and appreciate engineering.

It's important that people know their limitations too. If you realize that you need an ergonomist, then you go and find one and you hire them to consult for you. So you need to know what you don't know as well as what you do.

HS: What other aspects of traditional design do you think help with interaction design?
GC: The ability to visualize things. It allows people to make quick prototypes or models or sketches so that a group of people can talk about something concrete. It's an invaluable aid to the process. And making things that people like is one of the things that good designers have a feel for.

HS: Do you mean aesthetically like or like in its whole sense?:
GC: In its whole sense. Obviously there's the aesthetic of what something looks like or feels like but there's also the aesthetic of how it works. You can talk about an elegant way of doing something as well as an elegant look.

HS: Another trait I've seen in designers is being protective of their design.
GC: This is both a vice and a virtue. In order to keep a design coherent you need to keep a grip on the whole and to push it through as a whole. Otherwise it can happen that people try to make this a bit smaller and cut bits out of that, and so on, and before you know where you are the original coherence of the design is lost. It is quite difficult for a team to hold a coherent vision of a design. If you think of other design fields, like film-making, for instance, there is one director and everybody accepts that the director's role is to hold the vision; all the other roles are essential—cameraman, producer, scriptwriter, but it is the director who makes all the elements work together to make something powerful. One of the things that's wrong with products like Microsoft Word, for instance, is that there's no single powerful organizing idea in it that makes you think, "Oh yes, I understand how this all fits together."

Design is always a balance between things that work well and things that look good. The ideal design satisfies everything, but in most designs you have to make trade-offs. If you're making a game it's more important that people enjoy it and that it looks good than to worry if some of it's a bit difficult. If you're making a fighter cockpit then the most important thing is that pilots don't fall out of the sky, and so this informs the trade-offs you make. The question is, who decides how to decide the criteria for the trade-offs that inevitably need to be made. This is not a matter of engineering: it's a matter of values—cultural, emotional, aesthetic.

HS: I know this is a controversial issue for some designers. Do you think users should be part of the design team?
GC: No, I don't. I think it's an abdication of responsibility. Users should definitely be involved as a source of inspiration, suggesting ideas, evaluating proposals—saying, "Yes, we think this would be great" or "No, we think this is an appalling idea." But in the end, if designers aren't better than the general public at designing things, what are they doing as designers? ■