



The Design Management Interface peter gorb

First of all can I apologize. I'm not introduced, usually by Earl Powell the president of the DMI Boston, as the Father or the Godfather of Design Management. In fact he uses Grandfather now which is a bit more appropriate. Do those lights have to go down cause I like looking at people's faces? Is it possible to put them up? Good. Well nice to see you all anyway. I'm not a Grandfather of Design Management. You better describe me as an Old Testament prophet. I'm out there in the business wilderness preaching the same message about design. And I'm proposing to preach it to you again. I know there's one or two you here, certainly one of you have heard it before, and like a lot of Old Testament prophets, I always say the same thing. So if you've heard me before, go and have an early lunch. It'll probably suit you.

"The reason is there's a huge river of misunderstanding between the design and the business world. You have to start building a bridge between them."

How did I get to be a design preacher? Well I am not a designer. Incidentally that picture up there...I don't like looking at a blank screen. It's entirely irrelevant and most of my slides are absolutely...I'm not going to say medieval, I think the better word is archeological. So bear with me. Any of them that are important, and one or two are. The hardest to follow are the important ones. I can always get you copies of them. I promise that.

Well now I'm not a designer. I was trained at a certain business school across the river in Boston and had a first career as a professional manager in large corporations in Britain. During those years, I came to view and I can put my hand on my heart even though I'm outnumbered here, and say that although I was well advised by professional accountants, engineers, marketing people, even lawyers, much of the best advice was coming from designers. And this was as a line manager. I knew nothing about design. But I suddenly realized that they were also the most interesting people that I was meeting which has created a nice warm atmosphere in this auditorium hasn't it. Furthermore, I also discovered in a very large corporation, that it was quite possible to promote people from the design field into general management jobs. I took an architect we employed and turned him into the chief executive of a property company we owned, a huge company. He was the best chief executive they had in that place. And a woman who was in fact a theater designer, a theater designer by training, became the chief sales executive of a huge company manufacturing fabric, knitted fabric. They were both enormously successful and the reason that they were successful was that they were design trained. This had enormous implications. And it was a time when I began to preach about this. And in the mid '70s, much

to my surprise, the London Business School which is a standard business school sort of modeled on the standard American business school, it's probably the best in Britain, said "why don't you come for a year? We hear what you're saying. We think it's all silly, but if you've got something to say come for a year and say it." They said it like that I promise you. Well they were open minded and tolerant and they had a reason for saying it because if you began to preach and the student elected to come and they didn't come, you didn't stay. Well I stayed for 20 years. It's sort of a boast. I'm sorry I didn't mean it to come out like that.

I was trying to teach future chief executive officers about the huge contribution that design makes to effective business performance. It wasn't very easy. It really wasn't very easy. And I'll tell you more about that when I talk about what's going on now at Westminster University in London. We'll come back to that. The reason is there's a huge river of misunderstanding between the design and the business world. You have to start building a bridge between them. The bridge I started at the business school was from one side of the river. And I think your side is almost certainly that other side of the river for most of you here anyway. So too is the MBA from Westminster. But we'll come back to that later as I say. What designers need to learn, and this is the most important thing, is the language of the business world. Only by learning that language can you effectively voice the arguments for design. Now these languages are the languages of accounting. The language of financial management.

The language of marketing management. The language of statistics. Huge range of languages that you have to learn, but unless you learn them you won't be able to demonstrate

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that you as designers, and I mean this, have much more to offer the business world than most professionally trained people. It's actually an argument for you to change your careers. Not yet, but in due course. I'll come back to that as well. And this is true whether you are working in a consultancy and talking to your clients, or whether you're working in a corporation and talking to your colleagues and bosses.

Let me just actually press my technology and see what happens. Oh, I'm not sure I know that. Do you want to talk about it? I'm actually prepared to define design and design management. And of course it deals with those issues which you all know about, the standard textbook stuff. But do you know this? How much of you know about the role design plays on the balance sheet? Quite often when I talk to designers I say to them are they aware that design makes a greater contribution to the gross margin in either the marketing or the production

function. A greater contribution and I will show you a slide or two which I think proves it.

Response I sometimes get from design audiences is, what's gross margin? Be honest, put your hands up those of you that know. Oh, someone over there. Two, that's brilliant. That's usually more than exists. And yet, gross margin is astonishingly important. Let's go through them in reverse order. Information design lies on the profit and loss account. It lies on the profit and loss account as an expense cost and that's where your financial contribution lies mostly as graphic designers. Moving expense costs lead to the net profit of the business. Boring slide isn't it? Environmental design contributes to fixed assets as opposed to current assets. Hands up who knows the difference. You don't know the difference. Oh one, brilliant. It's terribly and important issue this. That comes to the second most important ratio in the business world which lies on the balance sheet, which is capital employ. Another boring slide. Product design lies as a contribution cost of sales. Because by reducing cost of sales, it improves gross margin and when you take expense costs off, you've got net profit. Now I have to say that I think those are probably, I think I could guess, the three most boring slides you've ever seen. Yet they are in terms of where you lie, in the world in which you serve, the three most important slides you've ever seen. Unless that one, because it is possible to actually measure the gross margin performance and design. And it tells you what production contributes, what sales contributes and what design contributes. And that's how it does it. By the sort of table which your minds, sophisticated in the use of figures and tables will instantly recognize as being. I'm going on about this aren't I? But they are terribly important these issues. Those tables ought to be in the hands of everybody in the design business. They really ought. If you want copies of them, I promise get in touch and it's easy to produce them and produce them with a bit of paper that tells you why. So that's what design management is. And there's a very important consideration there. It is the effective deployment by line managers of design resources in achieving corporate objectives by line managers, to the bosses to whom you report. They have got to be prepared to learn your language in the same way that you have to learn theirs. That's why design management is. Anyway, there we are.

What I'm going to do, is to take you for the next hour or so into the heartland of the enemy. To discuss with you the ideas and propositions which I use to supplement the education of intelligent, well-educated, experienced, but design illiterate MBA students, whose views on design still carry the stereotype, I'm sure you know it, that designers are people who are not very good at reading and writing at school, but quite good at drawing. You laugh, but that stereotype is around isn't it? And you've probably some of you experienced this. It's disgraceful that it should be, but it still is around. You're supposed to be terrible with figures, but you've got this mysterious gift which enables you to draw pictures and make things look pretty or fashionable or stylish, and all those trivial words. They are trivial aren't they? My proposition is to start with three things that I want to say and they may catch your attention and they may be exaggerated, but they are very important. I forgot to tell you, that's what design is. It's nothing else. Do you agree? I'll say what it isn't in a minute. It is a plan for an artifact or a system of artifacts. I'm restricting it's value because you can design philosophical systems and a whole lot of other

things and use the word that way and the definitions in the major dictionaries go to about 27 definitions. I'm sure you've looked them all up. But actually we are concerned with artificial things. Not natural things. Artificial things. The only time we design with natural things is landscape gardening. I can't think of another one. And design. Does anybody here know Dieter

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Rams? He was a very famous...he once put that list on a board and I thought he was referring to dentistry. Dentistry is very useful. Hopefully aesthetic. Understandable. Words are meaningless. These words are really meaningless. And that is one of the besetting sins of the design community says he, insulting his audience, that they use these "OK" words...these marvelous words which are all meaningless and mean nothing. Do you agree? Maybe you don't.

So let's move on to the three most important considerations. Those are terribly, terribly important. Why are you laughing? Write them down. I do actually slightly exaggerate to make my points, but I believe those three things are true. First of all design cannot be seen. Can you see that? You can say about that glass that it is beautiful or that it is ugly. You can say about that glass that it is value for money or not value for money. You can say that it is useful or that it is not useful. But the one thing you cannot say is whether it is well designed or badly designed because you weren't there when the design happened. Now you can guess at it, but in fact I'm simply making a horrifyingly simple point. The design happened before the product. Do you agree? And that's why I mean design can't be seen. It is a planning process. It is not the thing itself. And 90% of the confusion in manager's minds say oh that's a beautifully designed tie...that's the only reason I wore one. I've got the only one in the auditorium I think. Oh there's one there. It's gone out of use, this product. Well I had to put on something that I say is beautiful, but I can't say it's well designed. Now that is a terribly simple view which you all know, but getting it through to a manager is terribly, terribly difficult because he has always been used to saying what a beautifully designed motorcar. I mean I can think of a million things that are beautiful and were badly designed. Years ago we used to have a shipping industry in Britain. It doesn't exist now. I remember seeing a television program about the design office of a company designing big ships. There were I think, 150 people designing sitting at design tables designing, and I looked over what they were doing. There were at least twenty of them drawing the identical cabin with a bed in it and a table and wash basin and a lavatory. The identical people doing the identical things. There were six of them designing cocktail chairs. One of them had designed the cocktail circular bar, and the other five were each designing a chair. They were identical chairs. Now you can see why that company disappeared. The products were superb, but the design process was terrible. As soon as you begin to separate the process from the product, you begin to really get to the heart of what design is about. I think this is terribly important. It's an issue which once again managers don't understand. So that's the first thing. Design cannot be seen.

"Well I had to put on something that I say is beautiful, but I can't say it's well designed."

What about the second one. Design is not created. How about that? There's a hushed silence on the whole. Let me just see what I've got next. And I think you're going to agree with this. In industry in the process of making a product, there is a starting activity which I can draw like that and put a D in it. Sorry, a C in it. I only got as far as A and B. And down here is an M. Pretty exciting diagrams these aren't they? That's make, manufacture, distribute. Talking about the process that goes on in an industrial scene. That is creativity, development. All the vaguely creative things that I won't bother to define, but which you all know about. In the middle is a thing that I call design or product development or whatever you want to call it. What the function of that activity is, is to control the amount of creativity that goes into the product.

“That’s design. It is a separate function from creativity. Now, may I reassure you, quite often people in this field are quite good at that. Creativity and in many products both the creativity, the design and the make and manufacture happens in one person.”

What happens there from the marketplace through back to the deactivity, is something that puts probably a constraint on creativity. Because once again I'm sure you know there are many, many products that have died because they have been too creative for their marketplaces. Too much creativity can be destructive to the bottom line of a business. Is that depressing? Bear in mind that it is true. I've known many companies that have gone bankrupt because their products were too creative for the market. There's a vital activity that goes on in the middle that controls the flow of creativity into the organization and feeds back what is needed to the creative people. That's design. It is a separate function from creativity. Now, may I reassure you, quite often people in this field are quite good at that. Creativity and in many products both the creativity, the design and the make and manufacture happens in one person. And certainly in most craft products. And in most small organizations it does. But I am not denying that you're all not the most creative people in Canada. All that I'm saying is that recognize that you have two functions. That you do both things. You may do that as well for all I know. But to separate out in your mind that what you do creatively is different from what you do in terms of design is a terribly important thing to recognize. Well that's my creativity.

So, I'm going to need the lights up now because I've got a product here. I'll be back in a minute. We're a board of directors here of a corporation. The managers who are running it and we're meeting to discuss our product. I usually in a class allocate people jobs here, but there's too many of you so I'll play all the roles myself. I quite enjoy that as you may notice. The chief executive said this is our main product and the sales are down. He looks accusingly at the marketing guy. The marketing guy says well the problem is there's not enough variety. He said the trouble is we only make it with arms. Now if we could have a second model with no arms, that would be tremendous. And the chairman says to the rest of the board, “Right. What do

you think about that?” And the finance director says, “What?” Do you know what the finance director says? He says if we have two models we double our investment in stock, our return on capital employed goes down and we make less profit unless we sell them. And the production director says, “well I can make one without arms, but I’ll have to retool the production line and that’ll be investment costs and machinery.” And the director of personnel usually called human resources these days. The human resources director said but if we do that, we’ll have to retrain people and our training costs this year have gone over the top and so what do we do? Any they argue about it like that for a long time. What have those guys been doing? They’ve been designing this chair. They have been designing it. They have been treating it in the context of their constraints and opportunities presented to a product in the marketplace which is what designers do. Now sometimes of course, if you are designing you are lucky enough to be in a green field. And in a green field you start from scratch and what you do is absolutely new and then you test it in the marketplace and it’s much more exciting. But it’s very, very, very rare. The vast proportion of time in corporations you are amending, adjusting, moving forward slowly bit by bit with existing products and existing activities. I’m sure as designers you are aware of that. Usually the annual report that you do this year takes into consideration what you have done last year and for the five years back. The opportunity to do it absolutely from scratch again is very, very rare. Exciting, marvelous, but rare.

Now there’s the chair. We might use it again. What I really didn’t say about that product there is what design was doing. It was doing it’s most important function. It was acting as a thermostat. A thermostat switching on and off the appropriate amount of creativity needed

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to insure that the marketplace was satisfied. You should always think of design as a thermostat capable of balancing that, it needs to be said. But once it’s set and you do the setting yourselves, the board usually does the setting. The designer has to be sensitive to it and understand that he’s operating exactly the way a thermostat operates. I don’t know how that makes you feel. But actually it was quite interesting to managers who understood that function immediately and understood that they needed someone to do it and they couldn’t do it themselves.

Alright I think we have dealt in detail with the issue of design is not creative and you shouldn’t leave it to designers. I don’t say you shouldn’t. The answer is you don’t. It is never left to designers. It is always modified by managers and your ability as designers to interact with them depends almost entirely on your ability to speak their language. Now in that board that you met, who do you think your best friend is? The finance person, the marketing person, the personnel person, which one? I know. Overridingly the most important one is the finance

person. Overridingly. And I found that time and time again with experience working with boards who have designers. Designers are understood by finance people. It is the inclination of the designer not to show variety. To be authoritative in product and presentation. To make a statement which he believes is correct. Finance people love that because it costs less. Well I'm deriding them. I have found over the years that in talking to managers about these things, the first people to cotton on to the value of design are the finance people. So when you go back, if you're working for a corporation, go back and talk to the finance people always and first. They're the most important people you will meet whether they're your clients or whether you work in an organization with them. Terribly, terribly important.

Right we've gone through the process of being able to quantify where design lies. Where design lies in the balance sheet. We've gone through the process of arguing the case for design. We now thoroughly agree that it can't be seen. That it is not creative and you mustn't leave it to designers. That's true isn't it? Perhaps you still don't agree. But at least the issues are worth discussing. They are important issues.

Now having nailed down the importance of design and what its contribution is, why don't we discuss what you design trained people can offer the business world. That's what you offer. Those are the things you offer. There's a fourth one I haven't written down there. It's what I would call a personal style. You have a care for things, a set of skills, a methodology and a personal style. And I think these things all need to be talked about independently because they are terribly, terribly important.

Anybody know who he is? He's one of the most important men in the 20th century. He's Japanese. He's one of the most important Japanese ever. He's affected your lives far more greatly than anybody else in the world in the last 30 years. Who knows? Who? Yes. Akia Morita. Do you know about Akia Morita. Well he was the CEO of Sony and he started Sony in a garage after the war and finished up a rich man. I took that picture of him. He's sitting around an elegant dinner table at a place called the Royal Society of Arts in Britain where he was about to be awarded a thing called the Albert medal. It's one of the most important medals in Britain. If I tell you that Marconi got it. It is usually given to people who have made massive contributions to civilization. And we were sitting around at a table telling him how to talk to Prince Philip who give it to him, and the man on his right there is a typical example. I mustn't mention his name, of a failed electronics industry in Britain. I hope someone doesn't recognize him or I'll get sued. Akia Morita was a very... I was in charge as it happens at the time, and was arguing his case and I met him and you have to describe him. He was wearing to start off with... it's very important to this issue, impeccably tailored British suit made for him specially in Saville Row. He was immaculately turned out. He was most articulate. He was terribly good at talking about why Japanese managers were so much better at running Welsh factories than English managers were. You know you've heard that. It's sort of the classic stuff. And talking about marketing issues and where the word Sony comes from. You think it's a Japanese word. It's not a Japanese word. He was getting into the audio business and he was terribly impressed... you're never doing to

believe this...while a record of Al Johnson singing Sonny Boy. And he took one “N” out of it so it would look Japanese. And that’s where the word Sony comes from. It’s very interesting.

However, this was all polite...we were over lunch...polite lunch time conversation. And then he stopped and said let me tell you about my products. And he went like that with the dinner plates and pushed them apart. And he took out from his pocket the latest disk fashion. And he began...suddenly the temperature in the room went down...and he said this is the latest disk that’s come out and he talked about the technology of this disk and how important it was and he went into this pocket and he took out a film, which was the new film processing process. And he went on, I mean you could feel that suddenly the whole room had changed. And then he went into a pocket and he took that out. That was the first miniature television set. And you can see how he’s totally obsessed with it. And not only is he obsessed with it, but he had to have a special pocket made in his new suit to put it in. And I told this anecdote to British businessmen and ask them how many of them carry their products in their pockets and they all make electricians at a generating station you know. Obsession with product. A love and the care of things. You’re all like that. You like things. They’re much more important than people aren’t they? It’s a terribly heresy and you’d never admit it to yourself. But on the whole, half of your dreams are about things. I won’t talk about the other half. I’ve discovered they talk about it. They like things.

Have any of you met Ken Jiantwong? He’s a Japanese designer. A man with a big long beard. He destroyed the European motorbike market years ago. He runs a design consultancy in Tokyo. He’s also a Buddhist monk. The two are not incompatible because in fact what he is doing is part of his religion. And I was talking to him one day after a conference much like this and said, “Tell me is there some similarity? What do you do with young designers when they come and join them?” He said oh I know what I do. For the first 6 months with me, a significant proportion of their time is spent doing what I did when I was a novice as a monk. They clean things. Clean things. Stones, anything that they can find they clean. And they lovingly restore. Because a love and a care and a concern for things...he used these words...is what is behind my life. And he meant his life as a Buddhist. Now I am not an expert in Buddhism and I’m sure many of you are, but it is actually an issue in Eastern religions and culture that a concern for things is of much higher concern than it is in Western culture, particularly after the Victorian era when on the whole they began to denigrate things in favour of concepts. And the roles of engineers and designers and people who are concerned with things, began to lose status. Not so true in Eastern religions. The religion of Animism is concerned of course entirely with things. It’s a very interesting issue because I had been to a conference one (I’ll come back to this conference later on because it was very interesting). It was at Phillips in Holland. I’m sure some of you may know of it as a big corporation, and in those days it was successful. I don’t know how it is now. The head of design was a man called Bob Blake. And you may have seen his books. He’s written quite a lot. And I was on a talk table with him. I had a task which I will tell you about later. And in front of me were about 80 who were product managers and designers from Phillips all over the world. It was a very big corporation. Bob Blake is a large handsome fellow with a big

“Because a love and a care and a concern for things...he used these words...is what is behind my life.”

white beard. And suddenly we were discussing these issues and a Dutchman got up at the back and said, "I am in charge of product design for razors." And he held up a razor. This is a man's razor our newest product. This is a woman's razor our newest product. And he went on about these razors. And he said, "Above all, I hate men with beards." He'd forgotten that Bob Blake was sitting there he was so passionate about product. It's a very admirable and very, very worthwhile skill which you all possess to a much higher degree than most managers do. And I think that when they learn, they know how to appreciate it. I'm sorry for many British managers. I've sat in offices with British managers who've said that isn't there. They say well what do you do? I asked him and he says we are manufacturers of a range of household products. No I haven't got one in here because they're all in the warehouse and I've got a man there to look after them. And all I get anyway is a pile of figures like this which tell me everything and that's enough for me to see. And my heart sinks as I talk to him. Particularly when he goes on and says actually I'm not really an accountant either. I don't really want to be a businessman. I'd rather be a farmer. I repeat that because it was actually said to me once.

If you are in the business world, and you are concerned with making a product or buying a product in order to sell it, or using a product in order to operate in a room like this which is full of products, or producing information of the kind that we see around. If you are concerned with them, you have got to like them. You have got to be able to boringly talk about them actually because a lot of people are boring about them. Well anyway I won't go on about that because I believe it's a point you'd like. But be aware the third thing which was visual literacy, let me see what the next picture is I wonder. Oh it's that. Isn't that marvelously visually literate? You're driving along a country lane, you see a little wooden sign half tacked together in the hedgerow. A dirty old gate, I mean you go in and buy don't you? Fresh air. It's lovely. That is marvelous visual literacy. It was done I think by Adam Fletcher and it's in his latest book and if any of you have not seen Adam Fletcher's latest book, you should go and buy it. It is a book about visual literacy. It's astonishing.

Well what have I got next? Managers are usually enormously literate, enormously numerate and totally, totally, visual illiterate. When I was teaching in London Business School, I used to set students there a problem. I would say to them I want you to report to me on any issue about design that we have talked about. Anything. You've got total freedom. Oh yes you've got two small constraints. In the process of reporting to me you can't use any words and you can't use any pictures. I'm sorry...numbers. No words. No numbers. And they used to go into trauma and need therapy. It was really quite interesting to deny them their roots to expressing themselves in favour of what turned out of course to be pictures and models. They did it quite well in the long run. But it was a revelation to them they should be asked to communicate in that way.

Well visual literacy you know about altogether. It's the ability to use analogues for example. Analogues effectively. Do you remember the Citroen that was made where the speedometer was in a numerical called read out instead of an arrow? It lasted one model. Nobody driving a car wants to read out. Same with the airplanes. They do print the altitude and speed and everything,

but they're all on needles. Using analogues effectively. I used to actually go out on walks deliberately with a bad map with business school students and walk south and give them the map and say now follow the roads. It was quite complicated. And the idea of reading a map which pointed north, when they had to walk south...I mean the fairly competent ones turned the map around and tried to read the words upside down. Some of them went like this, and walked backwards. You laugh, but that's visual literacy. Something that you're very good at as designers. And managers are better and yet they need visual literacy all the time. They use them in flow charts. They use them in production flow. They use them in footfall in a retail store to see where products sell best. They use them in organization charts. They use them above all in the field of corporate identity which I'm sure some of you are involved.

I had a very interesting experience once. I was running a big corporation and we took over a bra manufacturing company. The technology a bra manufacturer uses is very complex. I'm sure you know that. They've got these straps on them that have to deal with differential loads. It's true. And the design and engineering of a bra is extremely complex. And in fact there's a huge technology into the elasticity of the straps. Anyway, I took this company over. It was terribly, terribly profitable, but they had no systems at all. And I called in the managing director to see me. He was a Hungarian guy. Very nice and charming guy. Drove a very, very big Rolls Royce, which the chief executive took away from him. Destroyed all his motivation when he took his Rolls Royce away. Anyway, and I said to him look I want you to report to me every month. And here are the figures you have to produce. And I had a big black book and I opened it up and I showed him each subsidiary company and had figures presented in the same way. I said it makes it easier for me to add them up. And he said well how am I going to do that? And he said well remember that MBA that you gave me when you were taking over who was examining our books? I said yes. He said to me why don't you let me have him in my company and then he can help me to do all this. And I said I've got my man inside because it's quite hard to get your man inside. And I said yes of course and he joined. And the months went by. You never see the chief executives of businesses you know. They report to you. and he reported into me every month and every month impeccable piece of paper flowed. and that piece of paper was filed into my filing system and I knew exactly how he was doing in terms of the other people. And one day by accident I met him in the corridor and I said oh come and have a coffee. I want to congratulate you in which you've fallen into our reporting system quite so easily. And he said oh

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I don't use that. I use this. And he took out a little black book. And in that little black book was his own system of reporting. And I realized that not only had I failed to integrate him into the company, but I didn't know I'd failed. And that was terrible. But if I'd said to him you are part

of the Blue Division which is part of the Y Group which is painted green and I'm sending round a designer tomorrow to integrate you in the same way and paint you a different colour, he may have protested and he would have done. And he may have fought and he might have won. But I would have known about it.

What's important about that anecdote is that it is about visual things. Visual literacy. Now those things are very important. I've got to hurry because I'm coming to the most important thing, a methodology. To find out in other words how before you even find out why. That's what you all do. It's the inductive over the deductive routes to knowledge which was being fought out as an argument in the 17th century between Loch and Descartes. And it's very important to know

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that the route that scholars use and scientists use, is the route that you do not use. They observe and they're outside the system in order to observe...and they have to be. They hypothesize from what they see. They formulate laws and on the basis of those laws they act. Engineers and designers and I mean engineers before they got corrupted into being applied scientists, proper old fashioned engineers. They build a model. This is you. You learn from the model. You realize that it's not effective. You destroy and you rebuild again. And you do that as many times as you have to until you get it right. And you are not outside the system. That is the way the method by which managers work. The more important thing that was ever said to me at Harvard Business School when I was a student was, that you have to act on incomplete knowledge. That is an anathema to scholars and scholastically trained people and academics who may have degrees which put BA after their name, but which I would prefer to put DA after, which stands for disabled academic.

Because to operate that way in the real world, and particularly the business world, gets you nowhere. You have to act on the way I've described. And it is the way instinctively the designers act. The method of the business man. I can go on about methodology for a long time. For example I have an example of an article in a scientific magazine. Scientific is a dirty word incidentally. a scientific magazine which talked about a number of buildings, bridges, in America it was, in the States. I think there were 80 of them that were falling down after 70 years of use. And the article was bemoaning the fact that if only they'd waited for the knowledge on how to do it properly, the bridges wouldn't be falling down. I suddenly realized the bridges bloody well wouldn't be there. The great thing about designers is they build the bridges. And they're good enough for a certain time, and they're already thinking about the next one. Getting on with it. Making it happen. Completing work in that way is something that's very, very much in the hands of designers and engineers and that's their methodology. You have a better methodology for running the business world than do most of trained business people.

And there's the issue of the last thing which is personal style. At that conference I went to with Phillips we were putting together and I was reporting on what they said, on what was the actual process that design people went through. And they came up after I think a lot of discussion, and there was a lot of people talking about it. That the process that you go through, your thinking process, your psychological process, your style, is shaped like a funnel. At the beginning you are raped with ideas and creativity. Raped with it. And then suddenly you realize that you have to get to a point B where you've got to have a cut off. And you work with that cut

“So there you are. Designers still in the closet. I say that because get out. You're out there not to design, but to run the world. To run the business world.”

off until you get to point G, which is the launch of the product. Because you know ahead of you that point D is the point of obsolescence. And I think that's probably quite familiar to a lot of you as an attitudinal thing. But the important thing they said, was that the obsolescence of that product does not begin at point D, or at point G, but at point B. As soon as you begin to narrow the funnel, the product is obsolescent. It's a very interesting remark. And so you do it a number of times. And you iterate and reiterate.

So, let's go back to the man with the beard and the razors. What your lives are about, your personal style is about. It's first of all passion and care and concern. Secondly that funnel and thirdly doing it again and again. So there you are. Designers still in the closet. I say that because get out. You're out there not to design, but to run the world. To run the business world. You can still do a bit on the side if you like. You can still sneer at the designers of the young people you've employed and are going to take over from you. But recognize that you have a central role in not only the commercial world, in every kind of organizational world. Terribly important. I just showed you that cause it's a nice picture.

It's the Great Exhibition Building as you know in London in 1850. The largest building of it's kind every constructed since. It was all prefabricated designed by one man in 6 weeks and built I think in 3 months. Am I right? Does anyone know? Well I thought I'd better tell your about can education help. Design management is being done at Westminster University at the moment. The teaching of it is carried out in two centers. It's carried out in London and in Boston. And we run two programs and we fly the faculty out to Boston from London and we have American teachers who will be flying into London as well. All the students on the program have that as the aims of the course. And I don't want to read it out to you. It's slightly bullshit words aren't they? Ninety percent of all the words you use in this kind of brochure are bullshit words. But what is impressive is the student groups. They're designers, engineers, business managers, all with at least 3 years working experience based in the U.K., western Europe, Scandinavia and of course the American continent. With people coming into Boston from

Australia actually and from South America, Canada of course. Is by any chance the next student here from Canada? There is one I know.

The course takes 2 years. It's 9 modules of 10 weeks duration. Each runs sequentially, followed by dissertation. Modules combine distance learning with 4 day workshops. Every 10 weeks they come into Boston or London for 4 days in which they present their existing projects and pick up the new ones and discuss the issues. Now the rest is on the internet. There are only 9 working days a year at the university. All these people are full time employed. They're young people. Men and women between 28 to 48. The most senior one I think is an American who is the design director of Microsoft. They are the most impressive student group I've met. And that's the modules of the course. Actually for those 4 day visits, we have now got into the mode where we're bringing all the Brits and Europeans over to Boston to meet up with the Americans at least twice a year. And all the Americans and others in Boston over to Europe to meet up with their colleagues there. So it's getting to be quite international. And there you are. I did put outside a few brochures about the program if people are interested and want to see them. And thank you. That's all I've got to say.