Jim Montague — Memo to staff of the Industrial Design Department

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JIM MONTAGUE – MEMO TO STAFF OF THE INDUSTRIAL DESIGN DEPARTMENT

SYDNEY COLLEGE OF THE ARTS 1985

Jim (James) Montague was head of Industrial Design at the University of Technology, Sydney, formally Sydney College of the Arts, from the early 1980s until mid-1990s. He was an influential design educator and remembered with affection by many of his colleagues and those many students who studied Industrial Design under his guidance. Students would be enthralled with his tales of the design elite from the United States, such as various Bauhaus émigrés, as well as Eames, Saarinen, and of his friend Chuck Owen from Illinois Institute of Technology. This would be complemented with engaging slide shows drawn from an extensive collection of images that would be precisely prearranged on an ingenious vertical light box before loading into duel Kodak carousels. His wife Mary, also a designer and who has run a successful design consultancy for many years, has kindly offered a selection of his writing from those formative years of Industrial Design at Sydney College of the Arts.

The following is a compilation of discussion papers circulated to staff during the 1980s. They offer an insight into his knowledge of design education and to the pressing concerns of teaching Industrial design at the time.

— Miles Park

THOUGHTS ON DESIGN AND INDUSTRIAL DESIGN EDUCATION

J MONTAGUE 1985

Design, and Industrial Design in particular, is in the process of turning a corner, of altering its mode of practice and its relationship to its clients and the production and distribution of manufactured products. To many practicing designers these changes are uncomfortable or even threatening.

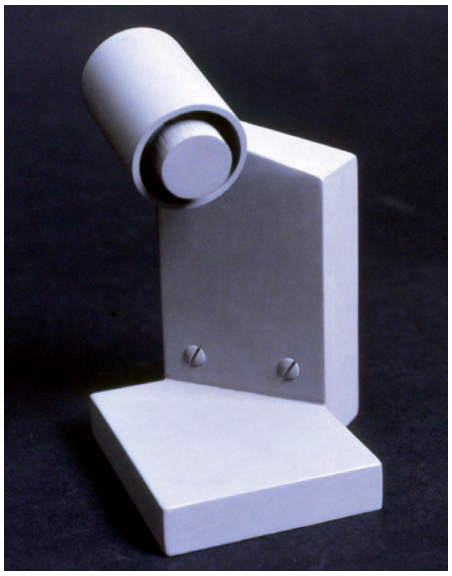
For many users of design services this changing role is almost as confusing as it is to some of the 'old guard' designers. To make the best use of design, in the long term, an appreciation of what is happening or about to happen can be of great value to the design using community.

Formalized design education really started in the 1930s. It was largely craft based and was more concerned with form and the individual making of form than it was with the functional performance of the product. Education either followed the current practice of design or one of the various theories. Teaching staff tended to be highly dogmatic in their approach to form manipulation or tied closely to the practical skills of presentation or production techniques. The early institutional instruction was based on the needs of the practice as it then existed and as such was more of a training course than an educational activity. Design students were taught to perform rather than to make decisions. There were, of course, several schools which tried to include more planning in their curricula and, indeed, several which ignored the immediate needs of the design profession by looking beyond the current state of the practice and suggesting other ways of doing things. The 'flavour' of each course was affected by the nature of the institution in which it was lodged. The Art School based design programs tended to retain the old craft based aesthetic with a form oriented approach without much, if any, reference to technology.

Design courses taught in Engineering institutions tended to stress the technical and 'practical' aspects of design, often at the expense of a sensitivity to product aesthetics. If the purpose of a design education is to prepare students not only to work in, but to exert a positive force on the process of product development for some time into the future then it must concentrate on those aspects of the practice which are likely to remain constant or which will only change slowly. One of these involves the designer's information base. Information is, itself, transient, but the need to search for information will remain a constant

problem for designers. The basic means of gaining access to information and strategies for the application of information are activities will which serve the designer as useful 'skills' for many years.

If education, as an activity, can be defined as 'learning how to learn' and training as 'learning how to perform' then a well balanced design program will contain the appropriate proportions of each. At least a minimum of 'training' should be retained. The practice still operates in both modes and requires designers who are comfortable in both. It seems reasonable in design education to concentrate in the earlier years on more of the training (skill, practice) experiences and in the later years with more opportunities to engage in research and to learn independently. Even this ability, however, must be introduced at an early stage. Neither should be totally isolated from the other. Nor should any of the teaching staff specialize in one to the exclusion of the other. This can lead to the thought, on the part of the students, that they are independent and competitive modes of practice. This belief can also affect the relationships of the staff to each other and to the total program. All of the classes, no matter what their prescribed content, should contain elements of both learning activities. Some, by their nature, will be heavily biased toward one or the other, but in a design school the attitude of exploration (part of the learning how to learn) should be present in even the most conventional course content. There is as much room for 'creativity' in engineering drawing as there is in objective drawing and as much hard information in classes in photography as would be expected in manufacturing technology. Design education must do more than simply provide for the current needs of the professional practice of design.



Left: Year 1 component form study
Above: Year 1 tactile form hand tool

TO STAFF OF THE INDUSTRIAL DESIGN DEPARTMENT.
25 SEPTEMBER 1985
DISCUSSION PAPER ON DESIGN EDUCATION – 'HANDS-ON'

FROM: JMONTAGUE

This is the first of what will be a series of papers dealing with some of the educational issues we must face in the immediate future.

1. BACKGROUND

We have all heard or read about the impact of TV saturation on the present school age generation. We have all noticed the differences between students who had some sort of accessible home workshop and those who didn't. Some of these previously common experiences lead to an 'innate' understanding of things structural and mechanical. Things either fell down or they didn't, they worked or they didn't. It didn't take an engineering education to figure out what had happened and how to fix it. Our experiments were scaled to our capacities and interests. It was through the accumulation of many unstructured, informal learning experiences that they, and we, learned about he world of things before we were taught about it.

2. THE PROBLEM

We can't screen our applicants for these previous experiences or we would have very small, and rapidly shrinking, entering classes. Another fact of current society is that women are usually less experienced in the 'hands on' skills of making things of a structural/mechanical nature than males, but there are certainly many males who share this problem and may have an even more difficult time in admitting their ignorance. How do we give them, in accelerated form, a range of hands-on experiences they didn't have through their home life or their previous education?

If our goal is to prepare our students to survive in and to take control of the professional situations in which they will find themselves five years or so after they complete the course we must stress basic principles, those which are likely to be useful for many years to come. One of these principles or capacities is developed by direct use of tools and simple machines to solve problems. I stress the direct use of equipment. It doesn't do very much good to emulate the second hand TV experience in trying to develop an appreciation of the

effect of a tool on a material. It is a little like watching a film on bicycle riding and never trying to do it yourself.

3. PROPOSAL

Our program, in the first year, must be structured to give as many of those free-form learning experiences as possible. The emphasis should be on exploration, investigation, discovery and analysis and not on getting 'correct' answers to posed problems in which we know and conceal the 'truth'. A correct answer does not give a very good indication of the ability of the student, it could have been a matter of luck and neither understanding or knowledge. The biggest problem in this plan is to assure the safe use of the tools and machines safe for the user, and the equipment. A careful and thoughtfully graded series of projects should be developed to build skill and confidence in the students. Not everyone will need the same introduction, students from country areas, both male and female, generally have a greater affinity for tools and processes than their urban or suburban counterparts. All projects should be 'open ended' so that there is no single correct solution, just those which are more sophisticated. These students should receive as much instruction and coaching as necessary and as many demonstrations as possible, but they must do the actual work themselves. It is crucial that no physical assistance be given to these less experienced students. This is necessary to ensure that they have really learned to use the equipment and that they can be expected to employ it intelligently to solve problems at a later date.

5. IMPLEMENTATION

We now have a curriculum whose content is largely controlled by the personalities and interests of the individual staff members. There is no intention of removing this personal element from the program, indeed it should be encouraged to give life to the classes. What is necessary is a framework of agreed upon goals toward which each staff member is working, each in their own area of specialisation. The development of a course content structure and set of goals would be of great assistance to new part-time staff who now are thrown in the deep end and are expected to swim to our sometimes obscure targets. I suggest that we start with the three-dimensional class; Technology Workshop, which we might re-name Workshop Technology, to be followed by Objective Drawing, Industrial Design, Engineering Drawing, Design History and our own Computing basics.

TO STAFF OF THE INDUSTRIAL DESIGN DEPARTMENT DISCUSSION PAPER ON DESIGN EDUCATION – 'OBJECT DRAWING'

FROM: JMONTAGUE

1. BACKGROUND

The Objective Drawing classes have become a solid base upon which we can build professional design presentation skills. One of the peculiarities of design drawing is that the objects being drawn do not exist. This means that the entire context and means must be invented by the designer based on general principles and conventions. We recognise the growing importance of CAD systems in design and see the time in the not-so-distant future when all exploration and presentation drawings will be produced electronically. There are some offices, overseas, which are doing this now. It will be some time before it happens here and until that time comes drawings will have to be made by hand.

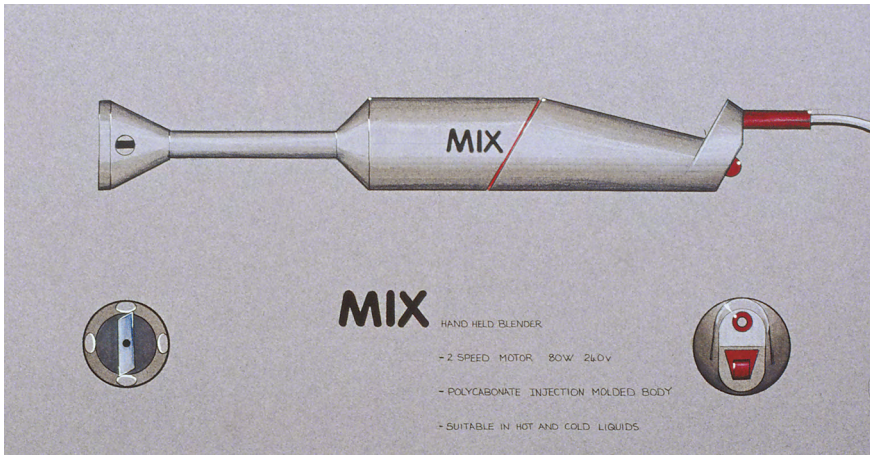
2. CURRENT SITUATION.

We are all aware of problems in the application of these early skill building experiences to the projects assigned in later years. We must face several unpleasant facts.

First, our entering students do not draw. This may be due to the kind of applicant we attract or it may be a factor of our screening policies, but this is a notable weakness in the first year classes.

The second fact is that they do not seem to become more interested in drawing after completing the mandatory Objective Drawing class. Drawing remains one of the onerous tasks associated with a design project. It seems that only in the third year will the odd student become interested in producing thoughtful exploratory drawings as a part of the design process.

A third fact is that, whatever else a student has as strengths, the absence of design drawing skills puts our graduates at a distinct disadvantage in the marketplace. Our program and our graduates have been widely and publicly criticised by officers of the Australian Design Council because of this shortcoming.



Year 2 rendering

3. OUR PROBLEM

It seems quite evident that unless our students achieve at least a basic level of drawing ability they will not be thought of as 'professionals' by much of the design community and will not feel the equal of those who possess this skill. The basic problem lies in the fact that few, if any, of our students feel comfortable drawing, either to try out ideas or to explain their ideas to others. These are the sorts of drawings which can be done on the backs of envelopes. They can have a great deal of informality, but must be clear and must convey the essence of the idea. The act of drawing must be so natural that it doesn't interfere with ideas being explored or explained. As we all know this can only come from drawing continuously. It cannot be achieved in class time alone. Drawing must become second nature, a major way of 'talking' to oneself and to others.

4. PROPOSALS

Drawing must be required in all design and design related classes as a part of the problem solving process. There need not be an orthodoxy to the style of drawing required and exploration of a variety of methods should be encouraged with examples of alternative drawing styles presented when ever possible. Each student should develop a personal style with which they are comfortable and which is consistent with the purpose of the drawing. High quality tools and materials must be used if 'professional' drawings are to be achieved. A formal presentation of design proposals should be required at some point in each project. The presentation quality should be critiqued as well as the content of the project. A separate assessment should be recorded and averaged into the project grade. The style and placement of graphic and typographic elements on the presentation board should be consistent within any student's presentation.