In 1913 the New South Wales Department of Public Instruction introduced a rule whereby all people henceforth enrolled in classes in New South Wales technical colleges needed to be employed in a trade for which the classes were deemed appropriate. This had the immediate effect of reducing enrolments by almost half throughout the State. Eventually, in the 1930s, at a time of deepening economic depression, the rule was revoked. There are valuable lessons, it is suggested, in this episode; when pressures are once again being felt for reducing the 'non-vocational' (or 'further') role of TAFE in the community. A study is made of the kinds of 'non-vocational' courses people were pursuing in NSW technical colleges prior to 1913, and parallels are drawn between certain perceived skills needs of that time and today.

INTRODUCTION

TAFE in Australia is lately engaging in much soul-searching in relation to demands that it be more responsive to Australia's current economic needs. Among ideas being canvassed with a view to bringing TAFE course offerings more into line with 'national objectives' is the suggestion that the 'further' part of education offered by TAFE should be more oriented towards vocational training. Indeed, in New South Wales anyway, there have been clear indications of a desire to 'remove general or further education from the brief of TAFE' and to 'put greater emphasis on trade training' (Stevenson 1989). Among those questioning the wisdom of such a move has been the (then) national secretary of the TAFE Teachers' Association, who contends that there are 'sound economic arguments' for maintaining TAFE's further education function, including the idea that the 'broad-based' skills being encouraged under current award restructuring arrangements will require continued, indeed increased, provision for the literacy, numeracy and 'other general skills' needs of the Australian workforce (Parkinson 1988). This latter argument seems to have been at least partly conceded by the Federal Minister for Employment, Education and Training, Mr John Dawkins, who, in his paper Higher Education - A Policy Statement, argues that '(it) is . . . likely that there will be further convergence between the traditional concepts of 'general' and 'vocational' education' (Dawkins 1988, p.69).

Mr Dawkins' latter opinion is expressed in the context of 'Adult and Continuing Education' (the heading of the section of the White Paper from which the sentence is taken), the two sentences immediately preceding it reading:

... the role of adult and continuing education will become even more important in the future under the influence of demographic pressures and other changes in the social and industrial
structure. The restructuring of industrial awards, as currently occurring in the metal trades, will provide financial and other incentives for the acquisition of additional skills and knowledge during working life.

Mr Dawkins is not alone in his opinion here. At the TAFE National Centre International Conference on Recent Research and Development in Vocational Education organised by the TAFE National Centre for Research and Development last year (1989), Colin Ball, consultant to the OECD's Centre for Educational Research and Innovation, argued that:

... it is less and less likely that an individual's experience of the labour market will be categorized by a smooth entry into one particular job which is then held for life. Individuals already need to regard the changing of jobs and constant learning of new knowledge and skills as the rule rather than the exception. (Ball 1989, p.284).

'Multiskilling' is said to be the need of the times. One could also quote Barry Jones, the former Minister for Science and Small Business, from his Sleepers, Wake:

Learning is a process of growth, self-actualization and self-recognition - a means of pursuing the abundant life, assisting people to understand the world around them and the world within, to enlarge their personal range of choice ... We would promote the concept of recurrent education as the essential right of every person as a means of self-development. (Jones 1984 p. 171-2 my emphasis).

THE 1913 REORGANISATION

Yet these concerns are not new. In 1913, the then Under Secretary of the New South Wales Department of Public Instruction, Peter Board, wrote to his Acting Superintendent of Technical Education, James Nangle (Superintendent from February 1914), expressing a desire to see a situation whereby 'the training ... provided by the (Sydney Technical) College ... be strictly limited to what is required to complete the education required to make a tradesman'. Board went on to explain that:

Undoubtedly the principal aim of Technical Education should lie in the direction of helping in the training of efficient tradesmen. This objective has not been sufficiently kept in view, with the result that many classes have been established which have had no definite place in the scheme. Again, students would be found in trade classes who, during the day, were engaged in quite different kinds of work. Innumerable cases of this could be cited. Last year, for instance, the Tailors' Cutting Class contained a student who earned his living during the day as a bricklayer. (Board 1913).
Board, whose attitude towards education has been described by Stephen Murray-Smith (1966, p.849) as 'strongly functional', proceeded to outline a scheme for the reorganisation of technical education in New South Wales based on the principle of limiting enrolments to those engaged in occupations for which the classes were deemed appropriate. His scheme was shortly afterwards released to the press by the New South Wales Minister of Education, A.C. Carmichael, who added that: 'In order to introduce this reorganised scheme one of the first steps will be to close some classes which do not admit of being properly made a portion of trade courses or of the diploma courses. ... It is probable that during the early part of the reorganisation the total number of students will diminish because the trades school (all colleges except Sydney and Newcastle were henceforth to be called these under the new scheme) classes will cater only for those engaged in the trades' (Sydney Morning Herald, 29 Nov., 1913). Total enrolments in fact fell from 26,468 in 1912 to 13,687 in 1914.

Board and Carmichael's proposal, which was put into effect the following year (and remained in force until a second major restructuring of technical education in New South Wales - basically restoring the pre-1913 situation - took place during a time of deepening depression in the 1930s)

1. In his Report on the Technical Education System of New South Wales (Government Printer, 1935), D.H. Drummond, NSW Minister of Education, attributed the fact that 'Generally, Technical Education in country districts has failed to meet the community needs' to, among other things, the 'Insistence on the vocational qualifications for trade courses', and a 'Lack of appreciation of the cultural value of a Technical Education' (p.14). The major recommendation of the Report, which was put into effect, was the abandonment of the 1913 designation 'Trade School' thus restoring the pre-1913 situation and leaving open the possibility of development of 'Further' education in country technical colleges.
OCCUPATIONS OF 'NON-VOCATIONAL' STUDENTS

If enrolment data from a few years earlier are any indication Thompson was representing a union which would have been well aware of what the proposed changes meant. A supplement to the May, 1903 Australian Technical Journal (published from the Sydney Technical College) contains a 'Return showing the occupations of individual students entered at the Sydney Technical College for the year 1902, and classes attended by them'. Against the occupation, 'Electrical and Railway Cleaners and Railway Employees', the following classes are listed as being attended: Fitting and Turning, Electrical Engineering, Physics, Carpentry, Photo-Lithography, Arithmetic, Algebra and Penmanship. But courses undertaken by some of the other occupations listed are even more remarkable. It is true there are no bricklayers doing Tailors' Cutting here, but there are some doing Carpentry, Design and Decoration. And 'Blacksmiths' were enrolled not only in Blacksmithing and Farriery classes, but also in Patternmaking, Fitting and Turning, Carpentry, Signwriting, Physics and Agriculture. One of the most intriguing groups is 'Engineers and Apprentices'. As might be expected, they are listed as enrolled in subjects like Applied Mechanics, Fitting and Turning, Mechanical Drawing, Patternmaking, etc. Along with these, however, are the following: Chemistry, Agriculture, Assaying, Metallurgy, Mining, Penmanship, Geometrical, Model and Freehand Drawing, Lithography, Geology, Woolsorting, shorthand, Quantity Surveying, Sanitary Engineering, Ironfounding, Blacksmithing, Plumbing, Boilermaking, Algebra and Elocution. Another occupational grouping is 'Mechanics and Machinists'. They are listed as attending classes in Agriculture, Boilermaking, Fitting and Turning, Applied Mechanics, Book-keeping, Mechanical Drawing, Electrical Engineering, Carpentry, Quantity Surveying, Handrailing, Woodturning, Penmanship and Life Painting, and Freehand, Geometrical and Model Drawing.

In his 1913 Departmental memorandum Peter Board referred to 'numerous classes in the suburbs and country in which freehand and other kinds of drawing are taught' and which, in his opinion, 'afforded very little instruction of the kind that is properly understood as technical'. These classes were, Board thought, 'mostly attended by students of the dilettante type'. As has just been seen, freehand drawing and other art classes were attended by people working in a number of trades in the early 1900s to which such subjects might not seem especially applicable. Another occupational group in the 1903 supplement allied to those just mentioned is 'Fitters, Turners, Drillers and Brassfinishers', and they are listed as enrolled in Drawing, Penmanship and Woodcarving, as well as in the kinds of subjects one might expect to find (Fitting and Turning, Patternmaking). Was this mere dilettantism? Or was there a deeper reason?

THE DESIGN QUESTION

On 23 March 1906 an item appeared in the Gilgandra Castlereagh which read in part: 'The intrusion of Japan into our industries is inevitable ... In trade, business always goes to the cheapest and best market. The first cry made comes from the Brass Founders, Finishers and Art Metal Workers' Association. This is a trade in which Japan is master'. Is anything new? We hear a great deal today about Australia's need to become more competitive on world markets in manufacturing, especially in the field of
originality and distinctiveness in design - an area in which we are said to be conspicuously trailing countries like Sweden and Japan. The Commission for the Future, for example, recently sponsored a national Creative Australia project aimed at encouraging Australian artists and manufacturers to get together to overcome this very lack (In Future, April 1989); and New South Wales TAFE is presently investigating the feasibility of offering a course in Industrial Design.¹ Yet as long ago as August 1911, R.T. Baker, curator at the Sydney Technological Museum (which was attached to the Sydney Technical College - it was the forerunner of the present Powerhouse Museum) wrote an article in the Technical Gazette of New South Wales (also published from the Technical College) on 'The Waratah in Applied Art', in which he and the Gazette's editors put out a plea to 'Technical Students in New South Wales' and 'You of the Arts and Industries' to 'read closely . . . on the adaptability of the Waratah to design' with a view to developing a 'Pure Australian Style' with which 'It is hoped that we shall eventually reach a standard where our own designing will attain a style for itself'.

Floral motifs were an important element in design in Western countries around the turn of the century. This possibly reflected what Geoffrey Blainey has recently described as a 'return to nature' which was 'conspicuous in the years between 1890 and about 1905' (Blainey, 1988, p.269) and which owed a great deal to the 'Arts and Crafts' movement of William Morris and others in England a couple of decades earlier. Ellul (1971) has referred to an 'unprecedented creation of certain aspects of style in the 1880s', including 'sewing machines decorated with cast-iron flowers' etc. which Ellul saw as a reaction to the ugliness of industrial society. Be this as it may, there is no denying the predominance of botanical themes in woodwork, metalwork, decorated tiles, wallpaper etc. from the time. One only needs to think of the iron lace-work which embellishes late Victorian buildings (see, for example, Turner 1985). An item appeared in the Sydney Morning Herald recently (22 March 1989) concerning a number of turn-of-the-century cast-iron lampposts recently uncovered on a Rocks building site: a photograph of two of the lamp posts, which were manufactured at the Clyde Engineering works, Granville, shows that these, too, are elaborately ornamented with floral patterns.

Further instances could be given, but enough has been said to make the point that botanical and other natural themes were part and parcel of late nineteenth and early twentieth century design in Australia and that such design was seen as needing to be encouraged and fostered. It is not surprising therefore to find people like engineers, machinists and blacksmiths studying model and freehand drawing, woodturning or even agriculture (of which botany formed a major component) as shown in the above 1902 enrolment data. Supporting evidence for the above data from the 1903 Australian Technical Journal exists in the form of a 1902-9 manuscript Students Admission Register from the Granville Technical College (which was then housed in the local School of Arts). In this we find entries like a thirty-nine year old painter, a fifty year old signalman, a twenty-six year old carpenter, a thirty-four year old ironmoulder, a twenty-one year old fitter and a twenty-two year old 'railway employee' studying agriculture; and an eighteen year old tailor studying 'Plant Drawing' (this subject is described

¹ I am grateful to Dr Hank Schaafsma for this information.
in the Technical Education Branch's 1910-11 *Handbook* as consisting of 'Drawing and painting in water-colours, Australian and other flowers, plants, shrubs, foliage, etc.,' and 'Botanic analysis of Australian flowers plants, etc. for decorative purposes').

CARPENTERS....WERE SCARCE

It is possible, of course, that at least some of these students were studying these subjects for no other reason than general interest. In any case, formal educational qualifications were not usually required for most trades at that time (with the exception of engineering after 1909; see Haas 1986), and time off for the acquisition of the same was not provided for under industrial awards. So students attending the classes were doing so on their own initiative and in their own time, and studying whatever seemed interesting and possibly useful. But what is wrong with that? Who can tell where one's interests may lead? The same can probably be said for many of the students listed in the 1903 supplement to the *Australian Technical Journal* whose occupation is described as 'Packers and Warehousemen'. They were studying Wool-sorting, Chemistry, Assaying, Geology, Mineralogy, Applied Mechanics, Electrical Engineering, Arithmetic, Carpentry, Wood-turning, Book-keeping, Penmanship, Elocution, Life Painting and Shorthand. Under Board's 1913 directives, many of these students would presumably have been debarred from attending these classes.

When one looks at the class lists from various centres, the same kind of pattern emerges. Thus a Carpentry class running in Kiama in 1912 comprised the following students: a jeweller's apprentice, a bank manager, a draper, two 'scholars' (ages fifteen and twenty-four), three 'farmer's assistants', a chemist, a manager of a milk depot, two printers, a butcher, a solicitor, an articled clerk, a school teacher and a postal clerk (Davies 1912). Similarly, a Carpentry and Woodcarving class in Blayney in 1913 consisted of two 'students', two school teachers, a draper, a clerk, a carter, a bootmaker and five women (ages twenty-three to thirty-five) whose occupations are listed as 'Home Duties' (Nangle 1914). Another Carpentry class in Katoomba in 1909 had as its members a teacher, eight 'unemployed' persons, a printer, a cabinet maker, a clerk, a labourer, a plumber, a cordial factory employee and a school student (Turner 1909). All these classes, plus many more like them, were discontinued at the end of 1913, Superintendent Nangle noting that with regard to the classes held in Blayney, for instance, 'there was not one tradesman - either apprentice or journeyman - on the class roll' (Nangle 1914). This closure prompted a protest letter from a Miss Parker, who wrote that 'I find the disappointment is keenly felt, so much so that a Public protest is likely to be made. I was speaking to one of our Aldermen today and he says the Council are unanimous on the subject'. (Parker 1914). At Kiama, "regret was expressed on all sides" at the closure (Hooper 1913).

But quite apart from the likely economic benefits of people being able to pursue their own interests (when Assistant Superintendent of Technical Education, George Hooper, visited Kiama in 1913 he was told by the Town Clerk that "mechanics, particularly carpenters and plumbers, were scarce"), there is the question of whether people should be prevented from living more meaningful and intellectually fulfilling lives. As was noted in connection with the Blayney class, something like half the number of students were
'unemployed' at the time (some may have been women actually quite fully employed in 'home duties', but this information is not made available for this class). Certainly a number of the students enrolled in Plant Drawing at Granville - and even in subjects like Chemistry - were women whose occupations are listed as 'Home Duties', or 'None' (Granville 1902-9). Barry Jones, to judge from his Sleeper, Wake! (Jones, 1984), would presumably argue this way; and in Higher Education: A policy statement, Mr Dawkins notes his government’s awareness of the Australian community’s ‘wish to be a rich society, intellectually, culturally’ as well as economically (Dawkins, 1988 p.6).

**GENERAL versus VOCATIONAL**

Geology was one of the subjects listed above as being studied by both engineers and apprentices, and packers and warehousemen (among others), in 1902. Geology - palaeontology especially - in fact appears to have been a subject of very wide general interest around the turn of the century, when the 'return to nature' referred to by Blainey and others seems to have entailed a fascination with evolutionary theory (see also Laurent 1986). In any event, lectures on geology and related subjects were a popular attraction at the time. For example, as an address by the Rev. J. Milne Curran, lecturer in geology at the Sydney Technical College, on 'the Rocks Around Sydney' at the Railway Institute in August 1898 attracted a 'large' audience (Australian Technical Journal, August 1898). Similarly, a 'good' audience turned up at the Kiama School of Arts (where the Branch’s classes were held) on Wednesday evening in March 1909 to hear Mr Carl Sussmilch of the Sydney Technical College give a lantern lecture on 'Earth History', in which Sussmilch treated such topics as the 'fossil remains of labyrinthodont and icthyosaurus' and the 'volcanic material and fertile soil . . . which in that permo-carboniferous period made material to support the luxuriant growth of vegetation which went to form the rich coal measures of the Illawarra' (Kiama Independent, 6 March 1909).

Such material may well have been over the heads of many listeners, but there seems little reason to doubt the general interest in these kinds of lectures at the time - augmented, no doubt, by the lantern slides. The Kiama Independent report on Sussmilch's address refers to the 'interest and imagination' excited by it, and this is understandable, given that the Illawarra is a coal-mining district, and that coal-bearing strata are a rich source of fossils with which colliery employees would have had some familiarity - indeed, Sussmilch was able to ascertain information from his audience concerning the prevalence of fossils at a local site (ibid).

The same can be said of other coal mining districts, for example West Maitland and Lithgow. And here again, the so-called distinction between 'general' and 'vocational' education breaks down. A copy I have of an 1891 Colliery Engineer's Pocket Book, which belonged to an employee of the Hermitage Colliery, Lithgow, and which was also intended as 'a textbook for the use of mining students, and especially for the use of those who are endeavouring to prepare themselves for government examinations', explains that 'coal was formed during . . . the Carboniferous period, and is therefore only found interstratified with the rocks of that age. These rocks are sandstone, shales, conglomerates, and occasionally limestones; and they are so similar to the rocks of the Devonian and Silurian ages that they cannot
be distinguished except by the fossils' (Anon. 1891, pp. xiv,44). For those interested in earth history there is no reason why such an interest should necessarily have a practical application, for those so inclined: nor need this be restricted to coal. One of the works purchased by the Sydney Technical College library in 1902 was entitled 'Observations on the new Vegetable Fossils of the Auriferous (i.e. gold-bearing) Drifts', by Baron Von Mueller. In any case, when the Lithgow Mercury initiated a campaign for the commencement of technical classes in the Lithgow district in 1901 by asking readers to write in nominating the classes they would like to join, Geology figured prominently, along with Coalmining, Mine Surveying and Metallurgy (Lithgow Mercury, 16th August, 1901).

CONCLUSION

This necessarily cursory discussion looks at the kinds of subjects people were studying in New South Wales technical colleges before they were prevented from doing so under an ill-conceived 'restructuring' of technical education before the First World War. I would suggest that this discussion offers a cautionary note to those well-meaning advisers who, in the current economic climate, would wish to see an end to TAFE courses for which immediate economic benefits are not clearly visible. The shift that occurred in technical education in New South Wales in 1913 can be described as a move towards a more utilitarian type of education, with an intended 'vocational' emphasis, at the expense of a more liberal kind. An extreme version of what was needed, embracing the Taylorist notions of the time, was expressed in the New South Wales Parliament in 1917 by Simon Hickey, Labor member for Alexandria: 'With technical education . . . the idea now is not so much to make all-round mechanics as to turn out men expert in work which has been largely sectionalised' (NSW Parliamentary Debates, Vol. LXVIII, p.1199). But as we have seen, this dichotomy between strictly 'vocational' and general education is a false one. Just as it was inappropriate in earlier decades, as was eventually recognised with the restoration of wider educational opportunities for working people in New South Wales technical colleges in the 1930s, so it would be inappropriate today, when the concept of 'multiskilling' is being put forward by people like Ball (1989) and others as Australian industry's most pressing need in an increasingly competitive world.

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