The designer as subject: role play as a teaching strategy in undergraduate design education.

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INTRODUCTION

Professional education is in flux. Established professions and conventional approaches to professional education are under challenge in regard to their goals, form and content. The 'technocratic' model of professional formation and practice which dominated the modern era has been widely criticised as inadequate for newly emerging needs and expectations (Bines and Watson 1992). There are calls to redefine the relationship between education and practice, and to reexamine the way we conceptualise the role of the professional, and alternative ideals of 'post-technocratic' or 'reflective' education and practice are being promoted (Schon 1983).

These challenges to professional education in a general sense are expressed equally forcibly within landscape architectural education. Over the past decade, critics such as Krog (1983), Hester (1983), Radmall (1986), and Turner (1991) have argued for a redefinition of the process of design, and the role of the designer.

Two particular themes have emerged from both the more general critique of professional education, and the specific concerns about landscape architecture. These are, first, the need for a greater emphasis upon practice as a creative performance, encapsulated in Schon's call for a focus upon 'professional artistry' (1987), and Krog's plea for a redefinition of landscape architecture as art (1983); and second, the need for greater awareness of the social and citizenship role of design professionals (Papanek 1985; Radmall 1986).

At the same time, a number of new approaches to teaching professional skills have come to prominence. These may be summarised as a focus upon 'theory-in-practice' (Schon 1987), which involves placing greater emphasis upon experiential and problem based learning, as opposed to the more didactic lecture based techniques that dominate conventional university curricula. Underpinning this change is a redefinition of the goal of teaching from one of 'mastery' of particular technical skills and bodies of knowledge, to acquisition of more generic skills for lifelong learning, developed within a practice environment (Boud and Felitti 1991). An important feature of such an approach is the development of greater self awareness within students of their own role and competencies, expressed by Schon in his ideal of the 'reflective practitioner' (1983).

One technique that can raise self awareness is the use of role play. In this paper, we examine the use of role play within studio type settings as a teaching strategy that addresses the vocational needs for 'professional artistry' whilst also helping prepare students for a wider citizenship, in which they must take an active part in defining their own role in society.

We first briefly review some changing perspectives on professional education, and then focus upon theoretical and practical arguments for an element of theory-in-practice within design teaching. We describe the general use of role play in teaching, and report upon
several examples of role play within the teaching programme at Lincoln University. The final discussion evaluates the case studies, drawing in part upon interviews with students, and concludes with an examination of more general issues related to teaching from experience. Our overall focus is upon the use of role play as a way of providing both experiential learning about practice, and the opportunity to reflect upon the designers own role in practice.

CHANGING MODELS OF PROFESSIONAL EDUCATION

Professional education is in a period of transition. In the traditional professions such as law, medicine, and architecture, and in emerging professions such as social work and teaching, the aims, methods and outcomes of education are under scrutiny. The technocratic models of education characteristic of the late 19th and 20th centuries, based upon specialist teaching institutions, which had replaced traditional apprenticeship, are in turn being challenged by new ideals, described either as post technocratic (Bines and Watson 1992), or 'reflective' (Schon 1983; 1987). There are a number of factors involved: rapidly changing knowledge bases, newly emerging needs and markets, economic deregulation, and perhaps most significantly, an increasing scepticism and mistrust of professional expertise and mystique amongst clients and the general population (Papanek 1985).

Problems of a technocratic approach

Technocratic approaches, based upon the belief that professionals are, in essence, instrumental problem solvers, involved teaching a set of fundamental facts, techniques, and skills in their application. The distinctive features of any particular profession came in large part from the specific knowledge and skills of its members, whilst proven familiarity and competence in defined areas was a prerequisite for membership of professional institutions.

The role of professional 'schools' in higher education was to provide formal tuition in these knowledge areas and skills. The process was underpinned by a belief in positivist science, in which 'brute facts' and universal laws are identified and derived, providing a solid technical foundation for a didactic education. In design schools, this technocratic model is exemplified by the typical curriculum which combines core subjects in the natural and social sciences and in practice techniques, with an integrating course in problem solving. The role of the student in such a programme is to become technically proficient in the application of the defined knowledge and skills.

However, the confidence and apparent certainty of such a technocratic approach, based in landscape architecture upon principles derived from modernist design theory, has come under increasing challenge. Krog (1983), for example, has argued for a reexamination of the relationship between design (and design teaching) and art. The target of Krog's critique was the way in which systematic models of design process appeared to be constraining or excluding creativity and originality from the practice of landscape architecture. Instead, he argued for designers to follow the example of avant garde artists, and to confront the 'terror' of creative production.

Turner (1991) characterised the issue as a debate over design method. He focused upon the disadvantages of the SAD
(survey analysis design) approach, as opposed to more 'postmodern' approaches (Turner 1993) using 'pattern language' or metaphor. The implication was that regimented teaching based upon the systematic application of supposedly universal principles within a prescribed process has lead to a crisis in both education and practice.

Radmall (1986) also focused his concerns upon the overly technocratic emphasis of recent practice. Citing a 'theoretical vacuum', he argued for an explicitly political and ethical dimension to practice. Other commentators have emphasised the need for greater participation in design (Hester 1983), or greater philosophical, historical and ecological rigour (eg Lyle 1986; Spirn 1988).

Meanwhile, the professions themselves have come under critical economic and sociological review, with increasing mistrust by the public of profession expertise. In turn, accreditation processes and the educational requirements of professional institutions and accreditation boards have come under scrutiny, with new tensions emerging between academics and practitioners.

**Learning by doing**

One response to these seemingly divergent pressures has been to assert the need for closer linkage between education and practice.

The shift to 'Learning by Doing' has two dimensions. First, as the economic rationalisation of late modernity makes it less and less attractive for employers to bear the costs of specialist training of new staff (Lash and Urry 1994), and as governments seek to reduce public spending on professional education within public institutions, so the pressure has increased to reintegrate teaching into the workplace. Recognition of prior learning and experiential learning are two concepts that are receiving significant attention in a range of educational settings (Weil 1989). Recognition of prior learning is intended to reduce the time that is spent by individuals within full time education, by granting credit to what Polanyi (1958) has described as the 'tacit knowledge' gained from practice. Experiential learning, on the other hand, describes a teaching strategy in which students undertake tasks which involve the types of knowledge which they seek to acquire. Such learning is often undertaken within the workplace, in a 'practicum' that is supervised by a suitably experienced tutor.

The second dimension of 'Learning by doing' is the use of 'practical' or applied projects as a basis for instruction and learning within the teaching institution. Such 'problem based learning' (Boud and Felitti 1991) may use either 'real world' problems, or simulations of such problems, and is particularly suited to assist students towards mastery in a range of generic competencies (Engel 1991). Advantages of problem based learning, according to Margetson (1991), include its open, reflective characteristics, its moral defensibility, and the way it expresses the nature of knowledge about a topic.

Both experiential learning and problem based learning are well established strategies within design teaching. Indeed, Schon (1987), who is perhaps the leading theorist on professional education, uses the architectural studio as an exemplar to illustrate his ideals of reflective learning. Despite this external interest in what has become the conventional model of teaching in design, there are, as noted above, continuing concerns within the
design professions themselves about the detailed form, content and focus of studio based teaching. In particular, the increasing specialisation of design teaching as a separate career from practice, when combined with the widespread use of the SAD model of design, is seen to lead to an unduly restrictive, inflexible, and overly theoretical approach to design.

Attoe and Mugerauer noted that "posing a project as a problem to be sequentially followed to its resolution fails to wholly engage ....designers minds" (1991:47). As a number of critics have pointed out, this can lead to a lack of creativity in design. Schon (1983) and Rowe (1986) have both argued that the linear problem solving model does not represent the process that professional designers actually follow in practice, and there have been a number of calls for a reengagement of design teaching with the 'real world' (Ward 1991).

Postmodernity and the 'real world'

The pressures that have created tensions in professional design teaching are themselves symptomatic of a much wider shift in social and cultural conditions, described by Harvey (1989) as 'the condition of post modernity'. Central to the theoretical literature on postmodernity is a complex and unresolved debate concerning the nature of 'reality' and of knowledge about 'reality'. Thus whilst calls for a focus on the 'real world' in teaching are congruent with the more general concern of postmodern thinking for contextuality in knowledge (Willets et al. 1995), the notion of the 'real world' itself becomes problematic. It raises the questions of with which and with whose 'real world' should education become engaged? And what role or roles should students be preparing or practising for?

One effect of such questions is to challenge the very identity of 'the designer' in the 1990s (Loos 1993).

A key feature of postmodernity is a recognition of the legitimacy of difference (Lyon 1994). Furthermore, according to Lash and Urry (1994), the distinguishing feature of postmodern living is the need to continually be conscious of and to reflect upon one's own persona and performance. This 'reflexivity' is as much aesthetic as functional. That is to say, we create and choose the roles we portray and play as much on the basis of style and symbolism, as upon utilitarian need. Furthermore, the act of choosing is a social and experiential process, rather than a cognitive exercise of rational deliberation.

An illustration of this aesthetic reflexivity is the conception of the 'soft' city, first articulated by Jonathan Raban. He defined the city as a plastic setting that awaits the imprint of each individual's identity, and which will then 'assume a fixed form around you' (Raban 1972). In this view of the world, learning to 'play a role' becomes a basic life skill.

Schon's (1983; 1987) ideal of the 'reflective' nature of practice parallels Raban's description of the individual in the city in many ways. Schon argued that the essential feature of successful professional practice is the ability to 'think-in-action' an to 'reflect-on-action'. He described this as professional artistry, setting it in contrast to the technical rationality that has characterised models of professional practice during the modern era. He noted the importance of situation 'framing', and argued that professionalism is based not upon the systematic application of universal truths or maxims, but upon the iterative use of exemplars and experiments in action. Practice is thus a form of performance, in
which the practitioner and client develop their mutual understandings of a situation in cooperation with each other.

The concept of role is thus an essential feature of both contemporary life in the postmodern city, and of professional practice. Indeed, discussion over the definition of professional and personal role is a continuing feature of teaching in a design school. Students typically seek some measure of guidance over their future role, but face a bewildering range of possibilities and potentials: avant garde artist (Krog 1983), ecological engineer (Lyle 1986), community facilitator (Hester 1983), urban designer/poet (Spirn 1988)? Even within the confines of conventional practice the traditional landscape architect will embrace diverse roles of client adviser and agent, contract mediator, office manager, and practice marketing manager (Marshall 1986).

Role play appears to offer a potentially useful and relevant teaching approach in addressing these needs and tensions. The idea of role operates at a number of levels. It is an instrumental technique of experiential learning, in which students gain access to the `real world' and `learn by doing'. It is a strategy for the development of the self awareness and skills of `thinking in action' that are essential for the `reflective practitioner'. And at a more fundamental level, the experience of `the other' revealed in role play, and the creation of coherent individual roles from the maelstrom of possibilities, provides the basis for a critical and reflexive education. In so doing, it can contribute to the development of the skills of citizenship needed to survive and succeed in the `soft cities' of the future.

Role play had its modern origins as a formally acknowledged teaching technique in early writing upon experiential learning (McCaughan and Scott 1978), although it is worth noting that role taking was a rhetorical device familiar to the early Greeks. The educational value of role play lies it its ability to embrace a range of dimensions identified in learning: cognitive awareness, affective or emotional response, and behavioural change (McCaughan and Scott 1978). Role play is one of the suite of approaches described collectively as simulation techniques, and has three fundamental components; the role, the situation, and the learning function (Van Ments 1983).

The basic concept of role has been an influential element in modern social theory, and appears within work on both the macro scale structure of society, and in situationist sociology, such as Goffman's work on symbolic interaction (1974). According to Van Ments, role play "emphasises the functions performed by different people under different circumstances" (1983:15). Many social theorists would today extend the concept of function to include the construction and interpretation of meaning.

Types of role play

Role play can be based on a range of different types of situation. The most basic involves a single actor `adopting a role', for example a designer at the drawing board imagining themselves as a visitor to a garden. Although not typically included in discussions on role play, this basic situation corresponds closely to Schon's ideal of the reflective practitioner. The problem, of course, is that to be effective the actor must already possess the tacit knowledge needed to carry out a role. Nonetheless, it is possible, and quite common in design
studios, to assign students individual roles to play out in individually. The tutor’s role is to help each student debrief after their individual episode of role play.

A more typical role play situation involves two people acting out different roles, for example a designer interviewing a client. This may be undertaken without an audience, for example with all the students paired up in class, or it may be undertaken in a ‘fishbowl’ setting, in which two students act out the role while the remainder observe. Another variation involves the tutor taking one of the roles in a one to one teaching exercise. More complex situations will involve a number of different roles or characters interacting in different ways, for example as a range of different players in a contract meeting. This may involve the whole class, or be undertaken as a ‘fishbowl’.

**Educational objectives**

Educational objectives in using role play may include learning about social roles, learning particular social skills and problem solving methods, preparing and rehearsing behaviours, raising awareness of others, and providing a focus for critical reflection (McCaughan and Scott 1978). Its advantages include the way in which role play makes the relevance of learning to the real world explicit whilst helping students to internalise theoretical constructs. Role plays provide the opportunity to explore attitudes and feelings in a positive and relatively safe way, and the fact that the process can be both engaging and usually enjoyable means that it provides an effective way of motivating students to learn (McCaughan and Scott 1978; Van Ments 1983). However, the most notable advantage in the context of this discussion is the way that a significant part of the responsibility for learning inevitably lies with the students themselves: it is impossible to participate as a solely passive learner. Habits and skills of active learning that are essential for the ‘reflective practitioner’ are therefore developed and encouraged.

Potential disadvantages cited by Van Ments include the resourcing needed, particularly in the need for a relatively generous staff student ratio; the possibility that roles and situations may need to be oversimplified as to make their relevance questionable; and the potential for the role play to ‘undermine conventions of the classroom’. This latter concern appears today rather dated, but there is nonetheless a risk involved in role play for teachers who are poorly prepared or unwilling to relinquish a significant degree of control over the process.

There is also a risk that students who are immature or socially unprepared for the demands of ‘performance’ can feel threatened or embarrassed, particularly if their behaviour in the role play does not match their previously stated beliefs or values. Challenges to unquestioned assumptions or entrenched views may, of course, be part of the educational objectives of the exercise, but McCaughan and Scott nonetheless warn of the need for careful preparation of participants before the role play.

The key educational outcome sought by role play is what Bateson described as level 2 learning, comprising observation, experiment, reflection, and interpretation (1973, cited in McCaughan and Scott 1978); all of which are essential components identified by Schon in his ideals of ‘knowing in action’ and ‘reflecting on action’. The typical stages to achieve this are to define the specific objectives and select a topic, to prepare the students for participation, to establish the situation, cast the characters, act the
scene, and finally but most importantly to
debrief and discuss the experiences and outcomes for the participants. We would add a further stage to this sequence, which is to reinforce the learning outcomes in subsequent projects.

Role play has been reported as a teaching strategy in a range of professional applications. It is particularly well documented in medical and social work teaching (see, for example, Graverholz and Scutari 1989; Kitzerow 1990; Koh et al. 1991; Wolff et al. 1993), where essential elements of professional practice revolve around one to one or small group interaction with patients or disadvantaged clients. Role play is less well reported in a systematic way for design teaching, although anecdotal and circumstantial evidence suggests that elements of role play are widely used.

There are several issues arising from the literature that are of particular relevance to the use of role play in an explicitly 'reflective' context. Graverholz (1989) and Brodsky (1989) both emphasised the value of role play in learning to appreciate the 'other', for example when dealing with issues of race, gender, age, sexuality, and class. As we report below, this parallels our experience in encouraging students to understand the nature of interaction with other types of professional and with 'non-professional' actors, and also raises the possibility of using role play to explore different possibilities within landscape architecture.

However, Van Ments warns against the possibility of role bias in the allocation of characters. On the one hand, if the role play involves 'real world' commitments (for example the construction a playground; see below) it is both tempting and practically useful to allocate key roles to people who appear to have the tacit knowledge relevant to the role. However this can result in the reinforcement of pre existing skills or social roles, and hence be contrary to the exploration of 'the other'.

It may well be that different teaching objectives within the role play come into conflict. As Brah and Hoy noted (1989), experiential learning can easily become a new orthodoxy, which serves only to reinforce existing practices and perceptions. In a related argument, Usher and Bryant (1987) refer to the danger of theory 'collapsing' into practice, that is, becoming an unexamined assumption, and argue for teaching situations in which conventional practice is seen as problematic and thus open to scrutiny and revision. As we note below, our experience has been that role play can be useful in both instrumental and critical teaching, which highlights the importance of clarifying the educational objectives of each role play situation.

Kitzerow (1990) highlights the crucial importance of planning for adequate discussion and reflection after the role play. This helps students both internalise and generalise their experiences, and is a critical step in the learning process. Van Ments identified three steps: to review the situation as it evolved, to analyse both the experiences of the participants and their overall interrelationships, and to then plan the next stage of learning. We have used student journals as part of the reflective stage, asking students to include commentary upon their learnt experiences, and have found this a good way to assess role play in a non intrusive way. Debriefing is also emotionally important, particularly after an intense or lengthy role play.

Role play clearly offers a number of teaching opportunities aimed at
enhancing the practical and critical skills required by the ‘reflective’ design practitioner. We have argued that the characteristics of role play - its emphasis upon ‘learning by doing’, its experiential and self reflective approach, and its focus upon performance within a social setting, make it potentially useful in addressing a number of the contemporary challenges facing design educators. In reviewing the needs and opportunities in current professional education we have noted those associated with the issues of ‘postmodernity’; particularly the recognition of difference and the ‘other’, and the idea of individuals as self aware or ‘reflective’ subjects. At the same time, as we will show below, role play has a technical teaching role well suited to more conventional aspects of design education, providing a vehicle for the acquisition of established professional skills. In the following case studies we will explore the extent to which the use of role play addressed both instrumental and critical teaching objectives within a landscape architecture department.

CASE STUDIES

The following case studies are based upon recent teaching projects at Lincoln University in the Department of Landscape Architecture. We present examples of five applications of role play: case study 1 illustrates a simple role situation in which a studio design project requires students to imagine themselves as ‘avant garde’ practitioners entering a competition. It is, we suggest, probably typical of similar projects in design schools everywhere, but we include it to illustrate our point that there is opportunity and value in explicit acknowledgement of ‘role’ in most if not all design teaching.

Case studies 2, 3, and 4 illustrate more complex role play situations in design.

We examine projects where landscape architecture students play the role of expert witness in a planning hearing (Case 2), where they act as advisers in a bicultural situation (Case 3), and where they take different contractual roles in project planning and construction of a children’s playground (Case 4). These examples provide insight into the opportunities and problems arising from role plays with ‘real world’ outcomes.

The final example, Case 5, is the most explicitly ‘critical’ application. It is based upon a graduate class in Resource Studies taught within the department and includes students from a range of disciplines. It is also based upon role play of a planning hearing, but includes an extended phase of individual and group reflection and critique upon the framing of knowledge and its relationship with power and interest.

The teaching context for all except the final case study is the Lincoln University Bachelor of Landscape Architecture programme. This is a four year undergraduate degree, with a graduate entry option which includes shared subjects with the undergraduate entrants. Each of the role play groups therefore included students with a range of backgrounds and ages. The Lincoln BLA is structured in a conventional format, with a number of compulsory theory, practice, and science subjects supporting a core progression of design studios. The studios have a linked set of educational objectives and learning outcomes through the 4 years, exposing students to a range of practice settings at increasing levels of complexity and sophistication. Outwardly, the degree structure is therefore typical of the ‘technocratic’ model of professional design education described above. However within this framework there is considerable emphasis upon the development of self directed learning.
and the use of role play discussed here is one example of the teaching strategies adopted.

CASE STUDY 1: The Design Competition.

This project lasts for 5-6 weeks in the middle of the second year. It has run now for three years with different content. There are three primary aims: to give students the opportunity to participate in the public theatre of a design competition; to develop skills and confidence in making 'strategic' design decisions; and to develop technical skills in design presentation. The project opens with an examination of the nature of design competitions using videos of the competition process. Students then undertake a short research project into the chosen topic: so far these have been based on three 'real world' competitions: the Perth Waterfront, an ecologically sustainable city for the Australian capital territories, and a regionally based 'avant garde' garden for the 21st century (Ellerslie Garden Show, Auckland).

Students are presented individually or in groups with a competition package, and work towards presentation of the competition entry. The finished entries are blind judged in a session which includes a jury of staff and visitor(s), and also requires the students themselves to act as judges. We finish with a group discussion upon the whole process. Where timing allows, we also send entries to the 'real world' competition.

CASE STUDY 2: The Planning Hearing: Expert witness

In this studio students role play as an expert witness presenting evidence to a planning hearing about a rural development project. In the first stage, they each individually complete a design proposal for a given site, typically a rural subdivision. This is presented as an application to the planning authority, complete with the necessary documentation for a resource consent. The applications are displayed to the rest of the class, and each student then selects a proposal, other than their own, which they critically evaluate from the position of an interested third party. They may role play an expert employed by a neighbouring landowner, or an officer from a regional planning authority, or a representative of a lobby group. They may choose to offer evidence in support of the proposal, or in objection to it.

The New Zealand planning system is based upon resource management policies and rules, which establish environmental performance standards for land use. Proposals for significant change in land use activity are initially considered in an administrative hearing, presided over by either a member of the planning authority, or an independent commissioner. They may be subsequently heard in a formal planning tribunal. Professional evidence presented in connection with a consent application must therefore have substance, and may be subject to vigorous questioning or legal cross examination.

External professionals are employed to tutor the students in the preparation of their evidence, and in practising their presentation. The project is supported by a local planning authority, who allow the use of their council chambers for the culmination of the role play, the 'mock' planning hearing. An experienced former councillor plays the role of planning commissioner. Students present their evidence in support of or against the proposal they have selected, and are questioned upon it. Similar types of question are used for each student, to provide some comparability of
experience. However, they are only allowed to join the audience once their presentation is complete. The complete hearing is video taped, and the recording used in the debriefing session which concludes the role play.

**CASE STUDY 3: The Marae**

New Zealand is, by statute, a bicultural country. First settled by Polynesian migrants from whom the culture of the takata whenua, Maori, developed, it was subsequently colonised by the British Crown. The relationship between Maori and the Crown has been, and continues to be contentious. However, considerable political and cultural weight is currently given to the Treaty of Waitangi, signed between representatives of most Maori tribes and representatives of the Crown in 1840. The Treaty establishes a set of mutual obligations between Maori and the Crown which are the subject of extensive debate. Recognition of the Treaty and the obligations it carries is incorporated in a number of statutes, and is also recognised within the mission and corporate goals of Lincoln University.

Whatever the arguments for and against biculturalism as opposed to multiculturalism, and there are many, the bicultural obligations of professional landscape architects are clear (see Challenger and Swaffield 1994). These require that students become familiar with and understand their roles as either takata whenua (people of the land), or more typically, pakeha (settlers), and in particular understand the design implications of these roles. The department therefore has a bicultural strategy which includes student participation in projects based upon marae (which are the focus of Maori culture).

These projects inevitably involve role play, as to even visit a marae involves adopting the formal role of manuhirri, or visitors, which carries obligations of behaviour and protocols. Indeed all formal interaction with Maori involves some measure of cultural protocol which is unfamiliar to many European New Zealanders. Beyond this, however, the role of the designer in projects involving Maori (and arguably all projects in NZ have a potential Maori dimension) requires explicit role play in a cultural sense.

Challenger and Swaffield (1994) have analysed in detail the teaching strategies used in a recent project on Nga Wha Wha national Marae in Christchurch, which involved students using design storylines to link traditional Maori myth with planting design for the Marae. In this example the role play was 'live', as students and staff played their part in Marae protocol as well as undertaking the design exercise.

The project is worthy of mention in this context for two reasons:

First, it provides an example of a culturally specific role play, and second, it alerts us to the importance of role and protocol in everyday affairs. For iwi based Maori, the role play of a formal welcome to a marae is a central part of normal life, and is both a celebration and reassertion of personal, tribal and cultural identity. The ceremony is based around recitations and acknowledgements of genealogy, which is reinforced in subsequent protocols within the marae. In accounts of western culture, on the other hand, we frequently down play or overlook the nature of ceremony, ritual and role within everyday life. Yet it is there, nonetheless, as sociologists and postmodern commentators point out. For New Zealand students, participation in Maori protocols heightens their
awareness of role and ceremony in their own lives.

**CASE STUDY 4: The Construction Site**

Our fourth example is part of a project implementation subject. Students gain practical experience in project management and construction by planning and undertaking the construction of a small play structure. The class of 30 students is divided into 6 teams, each of which assumes a particular role in getting the project built. One group adopts the role of main contractor, with responsibility for overall coordination, and the other five take different sub contractor roles. These may involve planting, earthworks or drainage, paving, or construction of timber play equipment.

The design is prepared by a landscape architect, and the students provided with a set of contract drawings and specifications. They prepare a cost tender for the work, and are responsible for ordering materials. This requires them to measure quantities, and obtain competitive quotes for supply and delivery. Typically, one or more 'deliberate' errors are designed into the drawings and specifications, which require them to seek clarification from the designer. Formal communications are used between the sub contractors and the main contractor, and between the main contractor and the designer.

The project culminates with the actual construction on site. Many students have had little previous construction experience, and instruction is provided in basic handling of tools, materials, and processes, including safety rules. The client is typically a school or kindergarten, who provide the initial brief, and funding for materials. This project is now in its 5th year, and in every year so far, construction has been completed satisfactorily, and to budget.

Project assessment is based upon a review of the work diaries that the students are required to keep throughout the project. These include both a factual record of actions, and a critical commentary and review, reflecting upon the nature and resolution of particular problems that arose, and their implications for real world practice. Reflection upon links between theory and practice are also encouraged.

**CASE STUDY 5: The Castle Hill Planning Hearing**

The final project is also based upon a planning hearing, but the format is significantly different to the earlier example. This was not a design project and involved students from a number of different disciplines, but we believe the process of formal reflection is one that may be applicable to design education.

The aim of the project was to give students the opportunity to experience and internalise the significance of the way situations 'frame' knowledge. It provided the focus for teaching a subject titled 'advanced theory in resource studies', which adopts the metaphor of the frame as a key concept through which to explore the contingent nature of knowledge about resources and resource use.

The project was in two parts; in the first students role play as witnesses in a planning hearing to consider an application to allow uncontrolled afforestation of part of the New Zealand high country. This is a contentious planning issue at the present time, with a range of diverse views and positions being expressed (Swaffield 1994). In the second part, students prepared a paper...
for publication, and presented a seminar upon it, that analysed the role play they had undertaken from one of several theoretical viewpoints. These were compared. Hence, not only were different positions about the substantive issue explored through the use of role play, but the content and expression of the roles were also subject to critical scrutiny.

The sequence was as follows: a scenario was prepared by the teaching staff, with a number of fictitious but plausible role descriptions. These were programmed to ensure that a diverse range of positions would be adopted with regard to the planning issue. Students were briefed about the substantive issue, and about the role play. They then prepared formal written evidence arguing for or against the proposed planning change, using whatever evidence best served their case. The role included both expert witnesses and lay, ie non-expert witnesses. In 1995 there were 14 sets of evidence presented.

The planning hearing itself was created within a formal hall in the university (in contrast to the previous planning example, which was based in a council offices). A video tape record was kept of the presentations, and subsequently made available to all the students. In this case, the part of the planning commissioner was taken by the lecturer running the project, (again in contrast to the previous example). He role played, and was videoed, along with the students. Each student presented their evidence, and was questioned upon it. However there was no formal cross examination on this occasion ( on one notable previous role play, cross examination by student `advocates` was so effective that interpersonal relations within the group were significantly disrupted ).

After the hearing, there was an extended debriefing discussion, and part two, the critical review, commenced. Students selected one of three given theoretical positions (realist, social constructivist, or critical theorist), and undertook a detailed analysis of the entire role play situation, highlighting the elements that were of particular significance to their chosen perspective. Finally these papers were presented and discussed at a series of seminars.

**DISCUSSION AND CONCLUSION**

The five case study examples outlined above provide a range of roles, situations, and educational outcomes. In this section, we highlight some of the most successful, and least successful aspects of the use of role play, and then draw out some more general issues of relevance to design education.

**Successful aspects**

After five years experience in using role play we have no doubt that it offers some very real educational advantages in design teaching. We base this conclusion on two sources of evidence: our observations as teachers, and student evaluations. Although difficult to demonstrate objectively, our sense as teachers is that role play appears to be highly successful at engaging students with the project work. This happens in three ways: projects that require each individual to make a discrete public contribution, for example the planning hearings (Case studies 3 and 5), create settings which highlight students awareness of their role as social actors; in contrast, projects that involve real world action (Case studies 2 and 4), create both a tangible engagement (dirty hands) and a sense of commitment to the outside client. The simple individual studio role play (case study 1) is less
successful in providing 'real world' experience, and requires greater imaginative engagement by the student, but can be very effective in encouraging a reflective attitude towards theory and process.

Student evaluations provide more objective support for these observations. Subjects at Lincoln University are regularly evaluated using student questionnaires, which we supplement with group discussion and interviews. LASe 307, for example, the subject involving the practical project (case study 4), has always attracted very positive scores and comments in the questionnaires and interviews when compared with other subjects, and despite the heavy workload, is clearly valued by students. Their comments typically focus upon the sense of realism and connection to practice:

"the main contracting role is enjoyable, because I can make decisions that will be implemented- I am spending other peoples money, so it has to be right"

"it is satisfying spending time working out the details, imagining this is the real world"

"I'm very aware of the interpretation of the drawings, and the safety of what we will build- it is testing our responsibility a bit"

The planning hearings attracted similar comments focused upon the role play itself:

"I took my role very seriously, and felt the studio was very believable."

"some external tutors and an external presentation venue was much more realistic, so I felt that I had to do it better"

A particular aspect of the planning role play identified by students is the way it forced them to address and overcome uncertainty about situations they might otherwise avoid:

"I was real scared about the hearing, wasn't sure about how to get the evidence across, but now feel quite confident"

"The project was very helpful- I will not worry nearly so much when I have to do it for real"

In contrast, feedback on the studio role play (case study 1, the competition), has emphasised the opportunities for reflection during the studio:

"I reflect by pretending to act as the client, as a lay person, and look at it as though I have never seen it before, to see if it makes sense, or is understandable"

"The reflective process was unconscious, constantly checking to see if the design met the brief"

"The set time frame for each stage provokes reflection, not as a continuous process, but at each stage"

Similar comments have been made upon the theoretically orientated planning hearing.

**Less successful aspects**

Student feedback has also highlighted and confirmed staff impressions of the less successful aspects of role play. Ironically, one of the drawbacks noted was the way that role play highlights the detachment of the project from reality:

"It would be easier to role play if I knew it was a more realistic project, if I knew it had a realistic chance of being built"
By creating a role, the artificiality of the studio situation was brought to their attention.

Other problems related to the difficulty of grading role play, and the differing levels of commitment among students in group work:

"Some students do not take it seriously enough, and if a price is not in on time to the main contractor, they don’t seem to worry"

This can disadvantage students in the same group who are more committed. As a result, we have evolved a system that avoids assessment of the role play itself, and focuses instead upon the quality of the students personal record and reflection upon the project.

In case study 5, for example, the theoretically orientated planning hearing, the class included overseas students for whom English was a second language, and a range of levels of maturity. As a consequence, the standard of verbal presentation varied significantly. This was not graded; instead, informal feedback was provided, and the grading based upon the written work. This approach is fairer in many ways, but has the disadvantage of focusing upon purely conventional indicators.

A contrasting problem in grading role play projects arises when students focus too much upon achievement of particular outcomes. For example, one of the features of social settings created in role play is that individuals, including visiting tutors, are encouraged to express differences of opinion and value. This acknowledgement of difference was noted above as a potential advantage of role play techniques. However, it can create uncertainty in students whose learning process is relatively immature, and who find difficulty in reconciling divergent viewpoints:

"(tutors) enthusiasm is important; (but) different tutors have different emphases, (which) can be difficult"

McCaughan and Scott (1978) noted the danger of role bias in role play, and we have experienced similar problems in the practical project in case 4:

"the people in the group organised particular roles, but just fell into doing whatever they were good at"

Others became so focused on the project outcome that the roles were disregarded:

"(there was) no role play within the group, but (we) acted professionally towards the main contractor"

Other issues

Client expectations are a continuing source of tension in the 'live' projects. On the early practical projects we experienced difficulty in communication, where different client representatives gave conflicting impressions and instructions to students when they were on site; this caused understandable frustration to all parties.

Perhaps our most difficult yet ultimately satisfying client liaison has been on Marae projects. In addition to the basic issues of role play as a pedagogical tool, these also involve political tensions between and within cultures. The concept of bicultural development is by no means universally accepted within Pakeha society in New Zealand, whilst there are a number of issues of conflicting claims to
status and influence within Maori society. We have had to resolve incipient racism within the student body: for some, the marae projects were their first personal experience of Maori culture. We have also had to negotiate conflicting demands and expectations from different groups within Maoridom.

These problems are not caused by the role play, but create particular difficulties in its management. We have attempted to address the racism issue through positive role modelling by staff and the majority of students: our experience to date is that face to face contact on a marae resolves most if not all problems of prejudice. Conflicting demands from Maori are impossible to fully resolve; instead, we expose students to the cultural and political realities, and attempt to provide role models in working through specific issues.

Role play inevitably involves power relationships, both between the role players, and with the staff organising the role play. This is particularly apparent when staff take formal roles. The situation highlights both the ‘game’ relationships, and the wider institutional relationships involved in learning and assessment. In case study 3, the rural planning hearing, an outsider was engaged as the planning commissioner, and the lecturer acted a neutral role which enabled him to ‘coach’ the students. Any frustration they felt at their own performance in response to questioning tended to be focused at the outsider, or themselves, rather than the lecturer.

In case study 5, on the other hand, the lecturer took a role as planning commissioner. Hence, when the hearing was analysed, the relationship between the commissioner and the expert witness came under critical scrutiny, and this extended to an examination of the underlying roles of the two parties within the teaching institution. Initiation of a role play project therefore requires a readiness on the part of the teacher to follow through the sometimes challenging personal issues that may arise.

**Role play and design teaching**

Role play clearly has both instrumental and critical dimensions, and these parallel aspects are a crucial feature in the use of role play as a teaching strategy in design. Role play is frequently presented as a technique for acquiring technical skills; in other words, an instrumental approach. Increasingly, however, it is also being recognised as a way to facilitate critical inquiry and reflection. These two dimensions are not discrete. The very act of ‘taking a role’ heightens awareness of ‘role’, and thus opens a way to either critical scrutiny of others, or self reflection. Our experience is that these both aspects of role play are likely to emerge from a role play project in design, whatever its initial focus. Clearly, the outcome also depends upon the maturity of the students involved, but it seems to us inevitable that both should be present. This implies both opportunity and challenge for design teachers.

The challenge is that use of role play, for whatever pedagogical goal, will inevitably raise questions about the overall nature and status of professional design teaching, of the sort highlighted in initial discussion. It raises questions of the choice of role, of its definition, of the activities it involves, and of the relationships of one role with another. Even a basic exercise in construction implies assumptions about the division of...
labour; between designer and contractor, between client and designer, between different trades, between male and female. The relatively stable relationships of the conventional professional designer (Marshall 1984), can no longer be assumed, and must be defined anew for each situation.

Use of role play therefore requires design teachers to be willing and able to articulate their assumptions about professional roles, and to accept that these may be challenged by new generations of students. But this of course creates the opportunity. If one accepts Schon's general premise that a new era of professionalism is emerging, that is based upon a 'professional artistry' of 'reflection in action', then role play offers an essential teaching approach. It is one that addresses contemporary demands for greater practical relevance in professional education, without implying a reversion to technical training.

Role play establishes the framework for a teaching approach that directly addresses the theoretical issues of postmodernity, by highlighting the role of individuals in consciously creating social reality. It opens the way for professional design to be redefined as a reflexive activity, in which the process is shaped by the design situation, rather than in terms of either a deterministic model of design, or a romantic and somewhat self indulgent notion of individual creativity.

Our experience of role play as a design teaching strategy is largely positive. Although there are problems and disadvantages, these are modest in comparison with the advantages. At the same time, we must acknowledge that the examples presented here still lean towards an instrumental approach; the critical dimensions are emerging as we discover the potential of the strategy. One result of the process of preparing this paper, however, has been to highlight for us potential directions that we might follow in the future. We hope that it will serve as a similar stimulus to other design educators.

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