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Conference Proceedings

Editors:

Hamish G. Rennie
Ali Memon

ANZAPS, c/- Lincoln University, Canterbury, New Zealand

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The *Australian and New Zealand Association of Planning Schools (ANZAPS)* 2010 Annual Conference was hosted by Lincoln University at the Hereford Street YMCA in Christchurch, New Zealand, from 17th to 19th April 2010. This Conference was ranked as a "B" category conference in the 2010 list of the Excellence in Research for Australia Initiative (ERA) by the Australian Research Council (ARC).

These Proceedings comprise primarily the full written papers presented at the conference. *Before publication these papers went through a double-blind peer review process and revision***.** The editors thank the international panel of reviewers for their contribution to this publication.

The abstracts of the remaining papers and the notes prepared for the fieldtrip are also included in this publication. *All abstracts were reviewed by the editors before the acceptance of the (revised) abstract for publication***.**

Hosting this Conference formed part of the active research and professional community engagement activities of the Environmental Management and Planning research theme in the Land Environment and People Research Centre at Lincoln University, and has been supported by Lincoln University's Department of Environmental Management and the Australian and New Zealand Association of Planning Schools.

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CONTENTS

CONFERENCE PAPERS

All papers in this section have been subject to double-blind peer review by an international panel of reviewers and have been revised accordingly before acceptance and publication. This 2010 conference was rated by ERA as B. 0

First Year Experience and Planning Studio Pedogogics

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Abstract

Studio Pedagogy is usually the realm of Architecture and the Arts rather than Planning. As student numbers increase and academic institutions place pressure on staff to achieve more with less and to improve student retention and heighten the first year experience, appropriate and effective pedagogies become critical.

Planning studios in most Australian Universities have been re thought and re structured in recent years and Griffith University is no exception. Our paper will draw upon some of the literature on first year experience and studio teaching and learning in general and look at what is happening in other first year planning programs in Australia. We will draw upon the changes made to the first year planning studio at Griffith's Gold Coast campus and comment on possibilities for and relevance of planning studios; specifically in relation to the first year experience and as a means to address the institutional call for excellence in teaching and learning.

Introduction

Studios are invaluable learning and teaching contexts in many creative discipline areas (Ochsner 2000, Gore 2004). As a learning and teaching approach, their main value is that they shift the role of the student from passive receiver of information to an active and engaged learner (Tucker & Rollo 2005). This mode of teaching is widely used in architecture, urban and regional planning, fine arts, interior and industrial design, and has also been used in fields such as physics in an effort to assist students engage in hands-on learning (Loss and Thornton 1997, Jamieson 2003). In design, planning and creative disciplines, studios are often used as a means of engaging with stakeholders outside the university and engaging with community groups to solve real-life problems. Studios are also teaching spaces that provide the context for developing community oriented learning and student sociality. They provide the opportunity for teachers and students to explore problems and identify and reflect on solutions in a reiterative way. Students learn from their teachers' experience, their application of concepts and they develop deep understanding by doing. Likewise, teachers learn about students and their challenges in learning, in conceptualising problems and in engaging in the theorypractice interface. Despite the utility of studio teaching however, there is relatively little literature available which examines the studio as an educational environment, a learning and teaching approach, or how to evaluate studios (Ochsner 2000). Properly conceptualised and delivered, studios can provide students with confidence, self esteem, substantive knowledge about a topic and a range of generic skills including communications skills, creative problem solving and critical thinking (Loss and Thornton 1997).

In this paper we argue the importance of a studio teaching and learning environment as an important and valuable First Year Experience component in the Planning program, in addition to it being a significant pedagogical space. We first outline what we consider to be a planning studio, we then briefly outline some general characteristics of current first year students; the Gen Y cohort. This leads into a discussion on the First Year Experience and the importance of studio as a valuable and meaningful contributor to this phenomenon. We end

with a look at some of the changes made to the first year planning studio at Griffith University, Gold Coast campus and argue that the charrette model is a viable and valuable solution to address the institutional call for excellence in teaching and learning, to achieve more with less, to improve student retention and to contribute First Year Experience programs.

What is a planning studio?

There is no one definitive description of what a 'studio' is. A web search gives 'studio' as being: a room in which art (music, painting, sculpture, dance etc) is taught, studied and or practiced; a room in which music is recorded and an apartment typology. Most studios in the disciplines of architecture and design are teaching and learning places (as opposed to spaces) that are inhabited by students and staff in various ways (see Green & Bonollo 2003). The studio as a place is often characterised by creative disorder and a degree of messiness; that is the place is appropriated by the students to suit their needs. Planning programs do not have the same tradition of studio teaching and learning that architecture and design programs have. Nonetheless, planning studio we argue is an important element in an undergraduate planning program. Although there is no single definition for a studio as a teaching and learning approach, there are a number of features that are common to many forms of studio pedagogy and it is these characterisations that distinguish a planning 'studio' from a 'workshop', 'tutorial' or 'lecture'. The features that define a planning studio are: project and problem based learning, emphasis on active independent learning, a balance of theory and practice, use of multiple teaching and learning approaches, project based assignments and the physical learning environment. Each of these features is briefly outlined below.

Project and problem based learning

Planning studio teaching and learning is essentially project and problem based. In planning studios Problem Base Learning (PBL) is focused on the processes of the planning profession, that is, the studio format links the student to their chosen career path in a very direct way. This makes the teaching and leaning environment relevant and meaningful to the student. PBL as a recognised teaching and learning approach has been around since the 1940s and has been taken up by different disciplines in different ways (Pawson, Fournier, Haigh, Muniz, Trafford & Vajoczki 2006). Generally PBL involves students working on a 'real' project to solve 'real' problems. Students frequently work in groups and sometimes individually to produce 'real' outcomes. The task of solving the problem becomes the means of learning. Goodnought (2006) argues that 'PBL is driven by open ended messy [or wicked] problems that require students to work in collaborative groups to find feasible solutions'. From a student perspective[1], PBL '*is a very exciting and interactive form of learning'.* PBL stimulates deep learning (Kotval 2003) which results in knowledge that is meaningful and long term. Importantly, PBL builds collegiality, albeit sometimes through dispute resolution, and allows students to be innovative and have fun in the process of finding solutions.

Emphasis on active independent learning

PBL requires students to participate in the teaching and learning process; students can not learn if they do not engage with the problem. This means studio attendance is essential. It also means that the studio needs to become a safe place for students to challenge and grow the 'self', a place where students assess their own knowledge and skills and take responsibility for the project and its outcomes. This is demonstrated in the

[1] All student comments are taken from anonymous student evaluations of first year planning studio 2006-2009 inclusive.

comment by a first year planning studio student, who wrote:

> '*Through the completion of this course I feel like a whole new person. Although this may sound corny I feel strongly about this as I have leant things about myself and the world I would not have known otherwise.'*

As this comment suggests, the planning studio is also a place where students can draw upon their personal life experiences to enhance their learning. The physical and pedagogical environment of the studio offers opportunities for students to take control of their learning and to learn at their own pace. Another student wrote: '*The studio is very practical and hands on. The environment is relaxed and here is a good atmosphere for discussion and learning.'*

Balance of theory and practice

Studio is not just about the 'practical and hands on' methods of teaching and learning. PBL requires an understanding of both theory and practice. This is supported by a student who comment that: *'The practical side* [of studio]*really helped make sense of the theory side. Bringing the two parts together well.'* In studio students learn skills in analysis, reflection, creativity in addition to those skills required for professional practice. The studio is a learning environment that brings together all strands of knowledge and experiences. Knowledge from other academic courses, different theoretical perspectives, personal knowledge and experiences are all drawn upon in the act of PBL. To support this pedagogy a variety of teaching and learning approaches are necessary.

Multiple teaching and learning approaches

Studio teaching and learning combines traditional lecture, workshop and tutorial approaches. It involves short presentations, given by academics and members of the profession, and instructions on various issues, techniques and skills. Teaching and learning approaches frequently include informal critiques of student work, student presentations, debates, small group discussions and learning by doing. Regular feedback is a key to studio teaching and learning, it also encourages and supports students in their learning process and generally results in higher student satisfaction. These teaching and learning approaches require longer contact hours than the more traditional lecture and tutorial approaches. To facilitate studio teaching and learning studios are timetabled in blocks and repeated twice or three times a week. Significantly, studio teaching and learning approaches require a higher staff student ratio than the standard lecture model. The optimum studio staff student ratio is about 1 : 15, more generally however it is about 1:20. A major benefit of having a larger number of teaching staff in one studio is that opportunities for divergent ideas and teaching approaches can occur and in doing so cater for an increasingly divergent (social, cultural and academic ability) student body.

Project based assignments

Another characteristic of studio teaching and learning is the type of assignments that are set. Assignments are project based, being tied into PBL pedagogies, and are usually in the form of folios, log books or journals, posters, presentations and the preparation of professional documents; rather than exams, academic essays and tutorial exercises. Importantly, assignments are usually designed to be cumulative and progressive and capable of being undertaken in the studio with the supervision/support of staff and peers. These types of assignment are frequently problematic to assess because they are qualitative

and subjective rather than being quantitative and objective. To address this problem, feedback is given to students, in studio, while they are undertaking the assignment. In some instances this feedback forms part of the assessment process. As with the previous characteristics of studio outline above, the type of assignments and the assessment of them requires students to attend and participate in the studio.

The physical learning environment
Because attendance and participation in studio teaching and learning is essential, the physical environment is important. Ideally the studio is a space in which students can create a 'place' where they can 'dwell', a place that students can identify with and make their own. It is important that the physical space of the studio accommodates flexibility, where desks can be re-arranged and the room layout can be reconfigured. For this to happen a dedicated space is desirable, however we acknowledge that this is not always possible given large students numbers and lack of facilities and funding in most universities around Australia.

In short planning studio uses problem based learning pedagogies, emphases active independent learning, provides a balance of theory and practice, uses of multiple teaching and learning approaches, sets project based assignments and utilizes a suitable physical learning environment with the aim to equip students with the skills, knowledge and practices that underpin their academic and professional careers. Importantly first year planning studio must be fun and challenging if students are to commit to completing their degree and thereby reduce attrition. These two points are supported by student comments: *'Studio has taught me invaluable skills that will be essential components of my career'* and '*Studio has played an essential role in stimulating my learning experience. This interactive course was quite fun, exciting, not to mention different.'*

Who are the first year 'planning students'?

Nancy Marshall and Christine Steinmetz (2008) argue that academics need to understand the learners themselves in order to know how to engage them. This includes understanding the likes and dislikes of the student cohort, understanding the lifestyle choices that they make and importantly understanding their aspirations and limitations. There is a plethora of literature on the Gen Y cohorts (17-32 year olds, born between 1976-1991) that gives some generalised indication of the character of many current planning students (Krause 2006, Williams, White & Tutty 2006). Gen Y students in Australia have grown up in a relatively stable and affluent world. Many are still living with parents and for most single parent families and same sex couples are considered a norm. Gen Y students purportedly respond best to instant gratification, are hard working and prone to depression and stress. Most of these students also have a consumer outlook to getting a degree and they expect choice and diversity in the offering of that degree. Significantly, most Gen Y students are in paid employment for the duration of their studies and they are strategic about how they spend their time in balancing work, study and social life. Given that Gen Y constitutes the majority of current and potential university students, many universities have taken steps to address the needs and peculiarities of this cohort.

First year experience and studio teaching

The first year experience of a university student is significant, it can make or break a

student and it sets the tenure for the remainder of their academic career, and indeed their career path (Upcraft, Gardner, Barefoot and Associates 2005). Annah Healy (nd p.5) writes:

> The first year of university study is arguably the most crucial time for engaging students in their learning communities and equipping them with the requisite skills, not only to persist, but to be successful and independent in their new learning throughout their undergraduate years and for a lifetime of professional practice

Most Australian universities gage the quality of education they provide through a combination of performance indicators that measure student engagement, student attrition and the outcomes of student evaluations. As part of ensuring a high quality product that is competitive within the higher education market, many universities have established First Year Experience programs, policies and guidelines (see Zimitat 2006; Office of Teaching Quality, QUT 2009). In one such guideline Sally Kift (in Healy, nd, p.3) suggests that 'The focus of our student' First year Experience (FYE) should be their facilitated engagement with interesting and challenging new learning environments and communities.' This resonates with the need to address the characteristics of Gen Y.

The challenge in achieving Kift's vision is the need to know who the students are. Most planners are very aware of the complexities around engagement: one size does not fit all. What is critical in the case of this study is that engagement is crucial to studio teaching and learning. By engaging students in studio work, there will be flow on effects that address the First Year Experience criteria. The first year planning studio becomes a space/place of transition into academia and the planning profession. The studio project aims at capturing and stimulating the enthusiasm of many first year students and channelling this energy into positive learning and teaching outcomes.

Krause (2006) argues that for many Gen Y students 'the transition to university can be a significant battle in that it may constitute a conflict of values, a challenge to one's identity and a threat to familiar ways of knowing and doing.' The features that define a planning studio that we outlined above (project and problem based learning, emphasis on active independent learning, a balance of theory and practice, use of multiple teaching and learning approaches, project based assignments and the physical learning environment) offer a safe place for this 'battle' to take place. Studio teaching and learning involves learning together which develops collegiality and resilience within the student body. This type of learning also potentially reduces student attrition (Tinto 2003; Cross1998). Vincent Tinto (2002 p3) writes that 'learning is a condition of retention. The more students learn, the more value they find in their learning, the more likely they are to stay and graduate.'

Studio and first year planning programs in Australia

Based upon the PIA accreditation listing (accessed on 24.02.2010) we identified 17 undergraduate planning programs currently being offered in universities around Australia. From a web search of these 17 programs we noted nine programs that possibly included a studio in the first year. Of these nine only four programs specifically identify the first year course as a 'studio' and were, as far as we could ascertain from the web based material, in keeping with our definition of what a planning studio is. The four identified studio courses all related to design and or project related learning. Of the remaining five programs, one course outline suggested that the 'lecture' and 'tutorials' were similar to our definition of a 'studio', however the word 'studio' was not used. The other three programs were difficult to determine due to lack of web based information. Further research is required to gain a better understanding of how studios are practiced, if at all, in different planning programs around Australia. It seems however that the studio is not a common teaching and learning environment in the majority of undergraduate planning programs in Australia. This is of significant concern as the studio environment is a valuable teaching and learning asset; and in particular in relation to the benefits to the First Year Experience and outcomes for the University as a whole.

Case study: GU GC intensive mode studio

So far we have demonstrated the importance of the first year studio in the undergraduate planning degree as an integral component of the First Year Experience and as an essential element in stemming student attrition. As student numbers increase and academic institutions place pressure on staff to achieve more with less and to improve student retention and heighten the first year experience, appropriate and effective pedagogies become critical. The remainder of this paper draws upon the changes made to the first year planning studio at Griffith University's Gold Coast campus specifically in relation to the first year experience and as a means to address the institutional call for excellence in teaching and learning.

Data for our case study is drawn from anonymous student surveys and evaluations of the first year planning studio between 2006 and 2009. All the surveys and evaluations were undertaken as part of the University's policy on course evaluation and half of the survey sample followed a university wide standard procedure: in-class, paper surveys comprising 10 standard questions relating to course structure and delivery, with provision for limited written comments. These surveys were administered in the final week of semester (week 13) by non-teaching staff and processed through the University's central systems. The other half of the data used in this case study is drawn from an in-class anonymous paper survey handed out to students in week seven (the middle) of the semester. This survey was drawn up, administered and processed by the studio convenor with the stated aim of gaining feedback specifically on the studio teaching and learning environment, what students had enjoyed most and what their biggest challenge had been to date. The response rates to both sets of survey data averaged at70% of enrolled students in the four year period 2006-09 (n80).

In 2009 the first year studio convenor reconfigured the studio course structure from three, two hour studios per week (ie 6 hours/week) to a combination of intensive and standard modes of studio teaching. This comprised an intensive three day charrette at the beginning of the semester, followed by a number of drop-in studios up to week seven. From week eight to 13 students reverted to a standard mode (ie 3x 2hrs/week) of studio teaching and

learning.

The reasons for this change are many. In addition to addressing the importance of the First Year Experience, the university is demanding efficient and effective teaching and learning on limited and constituently reducing budgets. This is heightened by the continual increase of student numbers (from 15 studio enrolments in 2006 to 40 enrolments in 2009 and 100 in 2010). The increase in student numbers places increasing pressure on facilities, and especially the studio spaces. The university is also placing greater emphasis on teaching staff to be research active and to take responsibility for student retention. These concerns are university wide and they have very direct consequences on the teaching of planning studios and the outcomes of student evaluations.

In addition to the university's demands there are pedagogical reasons for changing the first year planning studio format. Student evaluations consistently commented on the need for an increase in the staff student ratio. Students also commented on the difficulties of time management specifically given the demands for studio attendance and the completion of assessment. Many students indicated that they worked eight to 16 hours a week in paid employment and increasingly more students travel over two hours to get to the university campus. Students also consistently commented on the need for more explicit and meaningful explanations about design and in particular the assessment components. There was not adequate time in the two hour studio to cover the necessary material and students may or may not attend the other studios timetable in the same week. Many that did attend the remainder of the weekly studios needed to be reminded of the material covered in the earlier studio. This inevitable was time consuming and sometimes resulted in conflicting information being given to students. Students also felt stressed by the assignments because they did not attend all studios and again the two hour time slot was in sufficient to gain much feedback and progress on their assignment task.

In response to the issues raised above and as a trial, in 2009 the first year planning studio in the Urban and Environmental Planning program on the Gold Coast campus, Griffith University was re structured with very positive outcomes. The intensive three day mode followed a charrette format that incorporated the key First Year Experience curriculum criteria. Following Krause (2006 p.7) these include:

1 the studio as a place where students feel that they belong and are known to staff and peers
2 feedback and assessment begins early and continues over the studio semester
3 studio learning is active and experimental
4 students learn from peers by working in the studio and working in groups.

A charrette, as used in this paper, is defined as an intensive design problem based teaching and learning environment. Our definition draws upon the charrette, or design by enquiry workshop, that is familiar to many urban planners. The structure of the charrette is informal and combines a variety of teaching and learning approaches: formal presentations, discussions, debates, quizzes, role playing, one-on-one support, group work and individual work. Planning charrettes are usually project specific and focus on a particular problem. Break-out groups form to tackle different issues related to 'the problem'. The outcomes of each break-out group are then presented to the group as a whole for discussion and debate. The final outcome is frequently a professional document that proposes solutions to the problem presented. Following this charrette model, the intensive three day studio focused on the assignment as the 'problem'. Each of the three days were focused on a different assignment task, with students starting (and in some cases completing) the assignment

exercise on the day. The three assignments were design problem based, cumulative and progressive. Each day students were introduced to the new assignment and provided with the theoretically and practical knowledge and skills to complete the assigned task. Students had to produce individual work, working within a break-out group under the supervision of a studio mentor and or staff member. At the end of each day students were asked to show and explain their output to their peers in neighbouring break-out groups.

A number of planning students from different years were engaged as studio mentors to work with first year students; to assist them in their learning, to foster engagement and encourage innovation; scaffolding that is necessary for achieving the studio learning outcomes state at course outline. In summary these were to equip students with the skill and knowledge to:

1 Identify, read and interpret a range of information on different types of maps and architectural drawings;
2 Prepare maps, plans and written planning reports;
3 Identify and critically discuss planning and urban design issues;
4 Identify and use various sources of data to elicit information and analyse planning issues;
5 Undertake site analysis using skills and techniques taught in class;
6 Work and learn independently and in teams to identify and solve problems, to generate ideas and synthesis a range of information.

Students' output was notionally graded at the end of each day by the studio mentors and staff. Mentors and staff also took notes during critiques and discussions with students to monitor student engagement and progress. At the end of the three days students were well versed in the assignment criteria and had the knowledge and skills to execute the required exercises. The final submission was in the form of a professional portfolio for which the students had five weeks to complete and compile. During these five weeks three two hour drop-in studios were held to answer questions, and give help and support as needed. Attendance at these sessions was monitored and over 80% students attended each drop-in studio.

Student attendance during the three day charrette was also monitored and the results showed that there was a 100% attendance over the three days (n40).This was partly the result of a high degree of student engagement and demonstrated teaching and learning relevance to the planning profession. In addition, student and staff expectations were discussed and reiterated over the three days which kept students focused, challenged and engaged.

Partly because of the excellent attendance at the three day charrette, the in-class survey administered by the studio convenor produced a 100% response rate. In summary the in-class survey showed that 80% of the class experienced the learning environment as 'good'. Over half the respondents (n25-30) indicated that the studio had been challenging, fun and balanced theory with practice. Students expressed that they had experienced a sense of ownership of the studio over the three days and that they had developed friendships and networks that supported them in their learning. Student comments about what they enjoyed most about the studio include:

- *Challenging exercises with new ideas and concepts*
- *Learning the basic theory … then beginning to implement that.*
- *coming back to uni after 5 years was a bit scary but this was the best way to start Uni again! Very interesting and fun*
- *I got interested!*
- *How to compile ideas onto a page and understand the many key aspects and rules of planning then putting them into practice*
- *The arch of Planning extends much further than originally given credit for. Had previously learnt many of the concepts but their link to planning was new to me.*

Concluding comments

Most Australian university structures are changing, and when the Bradley report is acted upon next year and student numbers are no longer capped, these changes will be felt by most academics and in particular those that teach first year courses. Dealing with larger and more diverse classes with fewer resources will be an ongoing challenge for academics and students alike. Under these circumstances the quality of planning education becomes a contested realm. Without comprising quality teaching and learning outcomes planning courses such as studios, which are resource intensive in terms of space, time and staff student ratios, need to be reconfigured.

The restructuring of the first year planning studio on the Gold Cost campus seems to have answered the call for more effective and efficient teaching and learning pedagogies while also addressing the critical First Year Experience agenda. Using the charrette model the studio environment brings together the theory and practice of planning in a collaborative and student centred teaching and learning environment. The curriculum and pedagogy of planning studio becomes more than just preparing students for practice, instead it focuses on 'diverse communities of practice' (Prior and Harfield 2008) and critical engagement with planning (Gurran, Norman and Gleeson 2008). Prior and Harfield (2008) argue that the purposes of a pedagogy of critical engagement is that it seeks to 'impose discipline on both the future 'practitioner' and on planning itself … and [to ensure] that planning education … [remains] proactive … .' The planning studio ensures that planning education remains 'proactive' through project and problem based learning pedagogies, emphasis on active independent learning, providing a balance of theory and practice, the use of multiple teaching and learning approaches, the setting of project based assignments and the provision of a suitable physical learning environment. The first year planning studio is therefore a critical component of the undergraduate planning program and deserves to be recognised as such.

We give the final recommendation on studio teaching and learning to the students to relate:

- *Studio has given me a greater reality and passion for the real-life activities of a planner. Over the first year I was not convinced that a planner was what I wanted to be, but this course has re-defined and re-enlightened a passion that was dormant for a while now.*
- *[Studio] has challenged my abilities in every way and forced me to think outside the box. … I am more conscious of the world, and my place in it …*

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Visual Literacy: A Necessary Governance Skill in Planning Graduates?

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Abstract

Visions of the future inform planning decisions. Yet it is often unclear where our visions stem from, or whether we, as planners, have the visual literacy skills to effectively communicate multiple stakeholder visions. Our decisions could be based on past experience and exposure to past external and internal images (Neuman 1996). However, these previously seen images could influence us, as planners, in different ways depending on our visual literacy skills. Visual literacy, frequently perceived to be the domain of the Arts and Humanities, is concerned here with the "… kind of literacy that might serve for the entire university community, across all disciplines" (Elkins 2008, 3).

The concept of visual literacy as used in the case study is explored through a survey of advanced planning students and interviews with planners working in the profession. This research is underpinned by theory from photojournalism, environmental health and planning disciplines.

Introduction

The literacy capacity of Planners and the various aspects of design production informing their visual literacy are difficult to assess. In this project, visual literacy consists of utilitarian competency elements and an ability to evaluate, understand, interpret and use images in promoting "… social influences that are ultimately global in their consequences" (Crouch 2008, 204). In planning terms visualisation is used to open up planning processes for participation, increased understanding and improved quality of decision making (Al-Kodmany 1999; Appleton and Lovett 2003).

This project identifies visualisation skills of value to planning graduates so that they may focus more effectively on the merit of images as effective methods to inform consultation and planning decisions. We argue that images should not be used illustrative purposes alone.

The planning literature espouses the usefulness and effectiveness of communicating via visualisation, with various audiences in the planning process (eg. Nicholson-Cole 2005; Dockerty et al. 2006; Wallace 2009). However, these tend to assume but not specify visual literacy in its broader social sense (Vanolo 2008). According to Sheppard (2005, p.646), important "attributes of visualisation" include realism, environmental relevance, immediacy, affective content, and implications; these, he espouses, are better accessed via immersion, dynamic imagery, and interactivity. Rose (2001, p.4) proposes that we should use visual methodology to "discipline … passion, not to deaden it".

The visualisation methods in Table One are derived from planning literature. The descriptive use of 2D GIS is the dominant technique in terms of the number of publications debating best practice in its application. Neuman (1996) contends that planners, carry the images of location in their mind, thus research is needed to identify how these images are used and abused in the planning process,. Studios and workshops have been the common method of teaching and applying the various visualisation methods presented in Figure One (Wetmore and Heuman 1988, 143; Gurren et al 2008, 18). Gurren et al comment that workshops or studios are an important bridge between conceptual understanding and practical application of knowledge. However, as planning programs face resource pressures, intensive educational methods such as studios and workshops become difficult to manage,

especially given restrictions on casual teaching support (Gurren et al 2008, 42).

	Description/definition and application
GIS 2D	Methods used include GIS – illustrates geography, cultural and architectural history, neighbourhood weaknesses and strengths, opportunities and threats using maps and orthophoto maps.
GIS 3D	Virtual reality/Urban Simulation - 3D computer with photography to give the user the sensation of being immersed in a real world. Planner can communicate the experiential character of place. Complaints about the level of detail in design elements (e.g trees/shrubs). Most effective way to enable a client to see and use a project before construction.
Community Stories	The use of stories in land-use planning allows the landscape change process to be situated within the social meanings relevant to the community. This has meaning to both process and content of plans.
Artist Sketch	Person trained in drawing "urban scenes" including parks, streets, plazas, retail areas and detailed elements such as shrubs, street furniture. Human activities are depicted – giving human scale to the drawings. Drawings important to show people implications of policy for example narrow footpaths and issues illustrated showed difficulties for older people, people with prams etc. More support for widened footpaths. Artist able to sketch results immediately in a workshop or charrette so ideas can be illustrated for discussion and then changed.
Electronic Sketching	Same as above. Overcomes some of the limitations of pen and ink sketches. Able to quickly include elements such as trees shrubs an street furniture. Discussions with community and thinking through ideas not a linear process. New technologies being developed such as SMART board and improvement to graphic formats will revolutionise charettes and workshops
Web surveys	Web surveys useful to collect and disseminate and demographic, socioeconomic, public preference and other data of public interest – and to ensure that data accessible for interactive participation.
Photographs	Good for non- expert participants, identify liked and non-liked features, high degree of realism aids comprehension. Promotes democratic design and planning – aids in developing a common vision and agreement about the present visual characteristics of the community and desired futures
Computer photo Imaging	Photographs become multidimensional as they are digitally manipulated to represent physical space and changes to the space – sophisticated use of "layering" using design elements from a "library of images" which are then re added to the original photographs to show implications of change. Images can be placed in multiple layers, They can be merged, flipped, copied clipped and linked together
Promotional material (brochures, web site, booklets, videos	Content main themes of images and slogans technology, nature etc. need to identify the target audience. "Ideal" recipient tourist, business man, enterprise also concerns inhabitants positive picture regardless of specific audience. Also need to identify the characteristics of images which facilitate or hinder territorial transformation. These methods may be used to legitimise certain projects, induce behaviour – advertising idiographic images communicating positive or negative values. Argument as to whether they communicate sensations, emotions.
Physical models	No in-depth analysis of context and non-visual factors. Cannot readily change model as decision evolves.
Hypermedia	Combination of various communication tools (videos, maps, animation, text, graphics, sounds and statistical data in an associative format rather than a linear format – strength is mixing spatial, political, economic, and other related information. Hypermedia is the key to using and presenting the flood of planning information. Hypermedia is the key to using and presenting the flood of planning information that is increasingly available in a digital form. Keeps the interest of participants. But need an information expert, familiar with electronic content, guiding them in using the system.

Table One: Types of Visualisation Methods used in Planning **Sources:** Al Kodmany (1999) (2001a)(2001b); Rose (2001); Appleton and Lovett (2003); Appleton and Lovett (2005).

Callow (2008, p.617), in discussing the use of visualisation methods in education, claims that "… a multi-literate individual will need to have a variety of skills to make meaning of all types of texts", a point particularly relevant to Planners as they make sense of multiple texts including but not limited to written text, photographs, graphs, and 2 & 3D models - paper-based, physical or electronic - to inform and communicate planning decisions at different levels for and with various stakeholders and audiences. This is supported by (Callow 2008, p.102) who proposes "… an approach that can be situated coherently alongside the other literacies and the broader sets of professional and social practices being taught at the core of the University curriculum".

There is little in the literature that addresses the issue of appropriate application of the visualisation tools directly. However, Sheppard (2001, p.183) and others (e.g. Nicholson-Cole 2005; Al-Kodmany 1999, 2001b) alert us to the need to match the visualisation method

chosen to the purpose, intended planning outcomes, and the tools needed to communicate meaningfully with planners and community stakeholders. Furthermore it is important that planners recognise a need for a code of ethics to guide appropriate production, use and interpretation of images. This implies then, a need for training or education in visual literacy in its broader multidisciplinary social sense, so that planning practitioners are able to perform in accordance with a code of practice. In addition, Sheppard (2001, p.183) identifies an "… urgent need for researchers to monitor and evaluate the use and influence of landscape visualizations in practice"; a concept strongly supported by (Nicholson-Cole 2005) p.256) who warns about potential bias resulting from different interpretations, and in selecting designing and constructing images based on prior assumptions about the meaning of written text and images.

Aim and Objectives

The aim of the ongoing project is to investigate the literacy capacity of planners and the various aspects of design production informing their visual literacy via a case study on the Sunshine Coast.

The objectives of the initial pilot study were (1) to establish whether or not practising Planners are aware of, and manage for the use or misuse of, visualisation methods to arrive at desired outcomes, and (2) to assess advanced level planning students' sense of visual literacy.

Methodology

In this pilot study we reviewed the coverage of visualisation methods in the USC planning and planning related courses to determine which of the methods in Table One are taught and applied in student assessment. Next, advanced level planning students enrolled in the third and fourth year Bachelor of Regional and Urban Planning at the University, identified via the University's student database, were invited to participate in a survey to assess their opinion regarding the usefulness of visualisation methods. Of the 32 students invited, 24 (75%) participated.

Two professional planners, a strategic planner and a development assessment (IDAS) planner, were asked to participate in two ways; firstly they were asked to rank the same visualisation methods, and secondly, they responded to an in depth semi-structured face-to-face interview to explore how visualisation methods taught matched the needs of the profession.

Advanced level University students and professional planners were assumed to have the capacity to decide whether or not to participate, based on the level of decisions previously made in order to advance to that stage within the University or the profession. The two planners interviewed were asked to identify their planning education.

Only adults were involved in this project. On agreeing to participate in the pilot, participants were provided with a description of the project and advice that they could withdraw from the pilot at any time without penalty. Participants were not offered incentives to participate in the pilot.

Because of a potential conflict of interest between the researchers and their students involved as research participants it was important to cover ethics issues that could arise.

Ethics approval was also sought and granted for the wider project because it was important to demonstrate the correct processes to students (USC Ethics approval No. 09/12634).

It was made clear to both the students and practicing planners that there were no right or wrong answers to the questions or contributions to the discussions and that their participation would neither positively nor negatively influence their position as a student in the planning program or their career. Courses offered at the University are moderated by Environmental and Planning staff other than the researchers, so the moderation process would identify and manage any inconsistencies regarding favourable or unfavourable treatment of participating or non-participating students.

Data Analysis and Results

Table Two details the education received by USC student respondents in the use of visualisation methods through participation in a GIS course, two urban planning and design courses and an introductory course.

Table Two Application of visualisation methods in USC planning and planning related courses.

Program Year	Visualisation methods used in core planning courses	Visualisation methods used in planning related courses (excluding the minor)
1st	Development of a portfolio, "Good Urban Place assessment" using Lynch's criteria. (individual assessment	Reading of sketches/maps prepared by indigenous Australians.
2nd	Drawing base maps and constraints and opportunity mapping. Spatial design using 2D plans and 3D illustrative sketches. Interpretation of "PD-Online" - online spatial database and overlay system associated with Queensland planning schemes and planning scheme maps. Individual and group assessment	Heritage assessment using sketches, historical maps and photograph/video images. Spatial (2D) analysis of demographic and other statistical data. GIS data concepts and GIS maps, understanding GIS attributes and spatial query and understanding "geovisualisation", map layout and colours/symbols, Application of GIS and remote sensing techniques. Individual assessment
3rd	3D design of a room, Site analysis utilising GIS techniques, "psycho-physical" analysis (spirit of place). Land-use, transport and infrastructure Plans (2D) plus sketches. Group Assessment	Use of photographic images to illustrate environmental issues
4th	Urban Analysis for a whole town, Analysis of opportunities and constraints, preparation of a structure plan (SPA) and preparation of a code (mainly 2D, with photographic illustrations). Integration of individual stories Some use GIS in research project.	

They have also used images extensively in core planning, and planning related courses. At USC, students are required to do a generic GIS course but then apply the technique in 3rd and 4th year studio courses. Carlson (2010) believes that planning students gain more benefit from generic GIS courses if they are provided to brainstorm how this skill may be applicable in their future planning careers.

Figure One presents the mean findings from the student survey along with the individual results from the strategic and the development assessment (IDAS) planners addressing the suitability of visualisation methods as related to planning practice.

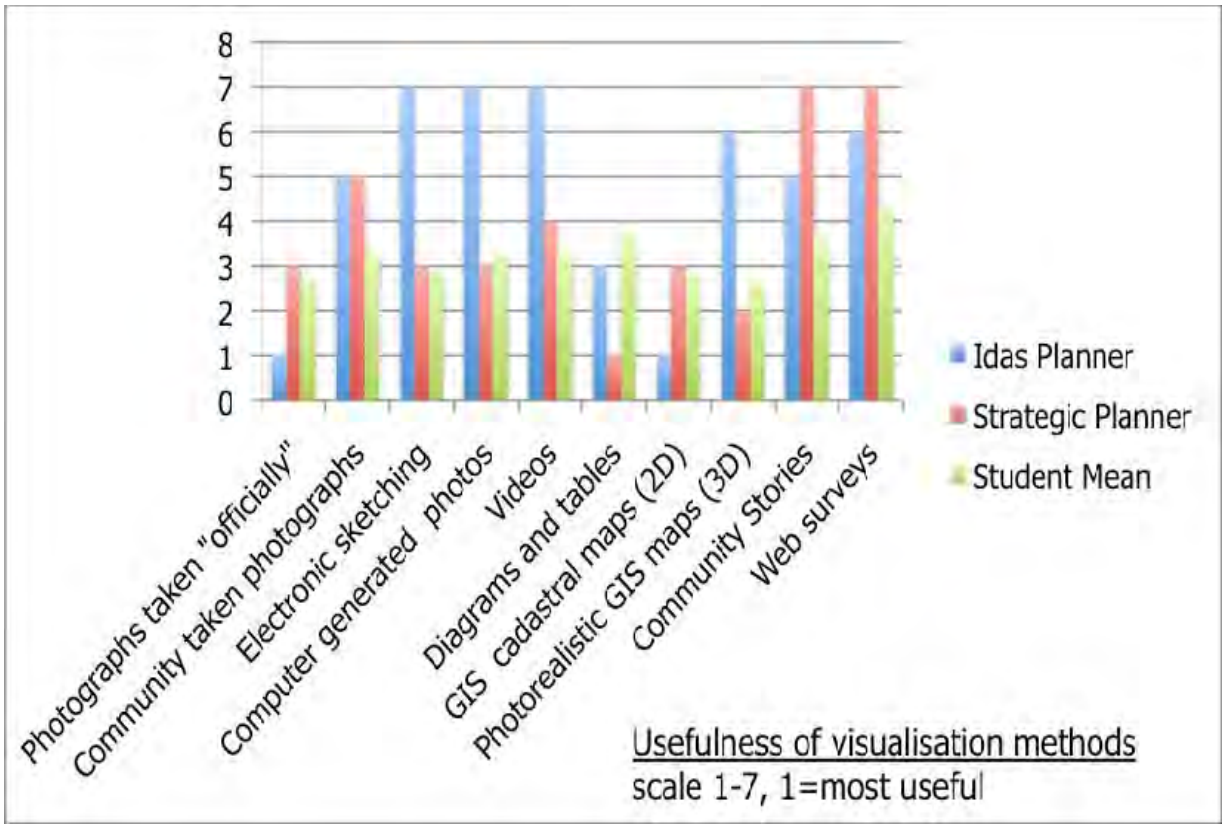

Figure One Usefulness of visualisation methods

It is clear from Figure One that the range in strength of opinion regarding usefulness of visualisation tools was relatively narrow for the student group, whereas there was considerable variation for the two planners. Interestingly though, the opinion of development assessment and the strategic planners vary quite markedly across the range of methods and between each other.

In the in-depth interviews with the two planning practitioners, both planners acknowledged the importance of visualisation methods in professional planning practice. The strategic planner sought clarification of the term "visualisation" and differentiated between IT architectural techniques (e.g. 3D electronic "fly thru" models) and the ability to read and interpret plans and maps whereas the development assessment planner placed more emphasis on the importance of 3D Architectural images of buildings and development. The strategic planner felt that planning students need to be assessed in terms of their ability to choose the correct visualisation methods and use them effectively in communicating ideas to the community and a range of other experts.

Both planners believed that the community did not really understand the way planners currently use models depicting the future in the presentations of the "Our Community Our future" discussion document and consultation process. However, they disagreed about whether the community should be advised of assumptions underpinning future modelling. Both agreed that the community was not currently advised of assumptions. While the strategic planner agreed that the community should "probably" be informed, the development assessment planner said that the community was interested in the bigger picture and thus did not need to be informed of assumptions underpinning consultation processes. The strategic planner felt very strongly that the community and the planning stakeholders should be aware of who was championing any proposals, and that electronic 3D modelling would become essential communication tool for the next generation of planners.

The development assessment planner believed that the public was always suspicious when Council planners tried to explain plans for the future. The strategic planner felt that community stakeholders focussed on the personal and local level of detail of any future models rather than engaging with conceptual thinking. The strategic planner's experience of the "Our Community Our future" (2009) consultations was that the community could not deal with high level conceptual information unless it was presented using appropriate visualisation methods. The strategic planner believed planners need to also think about the level of planning (region to local) when deciding on which methods to use in communicating planning ideas.

Discussion and Conclusions

The two planners agreed with the theorists that there is a need for improved awareness in the profession about the use of images in planning documents, especially now that communities are looking to participate in online debates about long term planning strategies (Al-Kodmany 2001a; Appleton and Lovett 2005; Carson 2008). In the past, the use of images was limited by printing budgets, but with online strategies, this is no longer a significant constraint. Both practitioners believe that with specific training planners will use visualisation methods appropriately, and become more aware of the ethics of using and misusing visualisation methods.

The pilot study indicates that students generally use visualisation methods illustratively even though third and fourth year students use tools like "sketch it". With this exposure illustrations are more sophisticated but remain essentially illustrative.

If planning students are to integrate their GIS skills and knowledge more effectively in developing their visual literacy, substantial changes are needed to the learning outcomes and assessment tasks in USC core planning courses. It would be more difficult to influence the content of planning related courses because these are also offered outside the planning program and so have multiple purposes and stakeholders. However, the planning staff can influence changes in these courses over time.

In this pilot study, practitioners and students do not see the potential of community stories and web surveys to support consultation as envisaged by Al-Kodmany (2001b). Again this would require planning student learning outcomes to be reshaped and for more applied computer learning within the program. This is a challenge under the current university funding regime.

The differences between the preferences of the development planner and the strategic planner have legitimacy in that the development assessment planner currently, under IDAS, responds to individual project applications consisting of plans, elevations and sections of proposed structures; whereas the strategic planner is trying to create and communicate concepts of future development for politicians, communities and other stakeholders. The implications of this result for planning education are that both sets of skills are essential.

In response to the findings of the pilot study, additional data for the broader research study will be collected via recordings, note taking, and researcher observation, at interviews with planners. Each participant will be shown a range of photos, graphs and other illustrative planning materials to stimulate discussion. This additional data and analysis arose out of a discussion with the student group in the pilot. The student's were confused by Callow's (2008) questions which raises concerns about their levels of visual literacy or of the

relevance of Callow's questions which were not put to the practitioners. More testing is required by the researchers before Callow's questions can be used to assess the visual literacy of University students beyond the Art discipline.

Table Three: Callow's (2008) questions to assess Planners' visual literacy capacity.

1. Affective Dimensions: • why do you like this image – explain • why do you not like this image – explain • would others respond in this way – explain* **This question is asked in order to establish levels of social awareness and the participants' ability to anticipate likely ways of thinking across various cohorts or groups they, planners, need to consider and be mindful of in the planning process.*
2. Composition Dimension: • what impact does the colour, shape, positioning, and textures have on you – explain • is there an emotional connotation associated with these image attributes – explain
3. Critical Dimension: • are there any implied social, ethnic, cultural, symbolic or power relation connotations • how and why do you suppose the creator of the image chose the compositional attributes of the image – explain • does the arrangement of the image content appear to be intentional, accidental or coincidental – explain* **This question is not intended to elicit a correct response pertaining to the "photographer's/designer's" intentions; rather it is used to assess the level to which multiple possibilities exist and to probe these possibilities.*

Overall the pilot study has demonstrated that researchers need to be cognisant of choosing methods because of the diversity of terminology. Even the concept of visual literacy is not well understood by planners even though the use of visualisation methods is critical in good communication of planning concepts. The researchers now need to redesign the questionnaires, introduce Callow's (2008) questions reworked to be relevant in assessing the visual literacy capacity of planners so that they may more competently focus on the merit of images as effective governance and communication tools to inform planning decisions.

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Climate Change Adaptation Skills for Professional Planners: informing new Teaching and Learning Themes for Planning Educators

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Abstract

The Graduate School of the Environment (GSE) in the Faculty of Science (FoS) at Macquarie University has undertaken a project entitled "Climate Change Adaptation Skills for Professionals" in the Small Grants Program of the Australian Government Department of Climate Change. Its aim is to improve and increase learning about climate change adaptation in undergraduate and postgraduate environmental management and planning programs (among others) within the FoS. This involved the following activities: identification of professional capabilities needed for climate change adaptation from several sources; review of the planning programs and constituent units; consideration of course content for incorporation of recommended professional capabilities; and consideration of the implications for teaching and learning approaches. The results of this research will be presented highlighting new themes arising in teaching and learning in planning education for climate change adaptation.

Introduction

This paper explores the capabilities needed by professional planners to work successfully in climate change adaptation (adaptation) and compares these to the graduate capabilities in the planning programs at Macquarie University. Climate change adaptation work offers a growing area of employment options for planners and requires an expanded set of knowledge and skills for planning professionals. The research titled "Climate Change Adaptation Skills for Professionals" in the Small Grants Program of the Australian Government Department of Climate Change has explored the question regarding the required adaptation capabilities for professionals. This paper will focus on the key findings for planners and planning educators drawn out of this broader work and ask some of the harder questions about the current scope and teaching methods of planning education. The review of what is being taught and how it is being taught at Macquarie University is kept fairly brief. The research regarding climate change adaptation capabilities required by employers for adaptation related positions and the implications for planning education is dealt with in more detail. The method used involved exploring the capabilities demanded in climate change and adaptation related job advertisements, literature reviews, and employer interviews and resulted in some interesting recommendations applicable to professional planners, student planners and planning educators: firstly, in areas of discipline knowledge, we recommend a move into some new knowledge areas for planning; secondly for teaching and learning strategies, a renewed motivation for 'work integrated learning' processes; and finally in professional skills development, competent use of a number of technical professionally-oriented tools highly valued in the growing climate change adaptation job market. This work has broader implications for all institutions involved in planning education and for the educational accreditation requirements of the Planning Institute of Australia (PIA).

Background Climate Change Adaptation

As building and environmental professionals prepare for the implications of climate change, they need to be informed on particular knowledge and approaches in the field and have skills to work with uncertainty associated with planning for and adapting to climate change. In Australia, there is a conservative projection of up to 1 degrees Celsius rise in temperature by 2030 and closer to 1.8 degrees Celsius by 2030 that means that Australia must prepare for impacts such as sea-level rise, changes in rainfall patterns, and increased frequency and intensity of extreme climatic events (CSIRO 2007). Climate change adaptation must be incorporated into professions such as planning to address the vulnerabilities and exposure of the natural and built environment and their communities. In 2007, the Coalition of Australian Governments (COAG), released its draft National Climate Change Adaptation Framework (NCCAF) which recognised the importance of integrating climate change into education and training for the key professional (COAG 2007).

Identification of professional capabilities needed for adaptation

This paper reports on a project aimed at the identification of the professional capabilities required by employers in government, community and industry sectors to meet the challenge of climate change adaptation in Australia. Further to that, the research considered the sorts of skills and knowledge in climate change adaptation that will need to be embedded in tertiary courses, to prepare graduates for their future employment. We also canvassed employer views of the current importance of adaptation in the workplace compared with other environmental imperatives. Although the focus of the broader research was in the areas of environmental management and planning, this paper focuses on the results and implications for planning specifically. A large amount of literature has already been published on the impact of adaptation on planning policy (e.g. Biesbroek et al. 2009, Lyth et al. 2006) but few studies have examined the impact of adaptation on the teaching of planning. This paper seeks to fill this gap by identifying the professional capabilities required by employers.

> "To the extent that curriculum design, teaching and learning strategies, and assessment activities are directed to fostering and recording student achievement of identified generic capabilities, universities send signals to key stakeholders about their commitment to producing certain kinds of graduates at the completion of study programmes" (Bowden et al 2000).

The results of the research and this paper will inform future coursework in postgraduate and undergraduate planning regarding modes of delivering adaptation capabilities, curricula and course development. These findings could also be applied more widely to other professions such as engineering, architecture and those in the built environment more generally (COAG 2007)[21].

[2] The precursor to this project, entitled *Professional development in climate change adaptation for built environment professionals*, was funded by the Australian Government Department of the Environment and Water Resources (DEWR) and undertaken by the Australian Research Institute in Education for Sustainability (ARIES).

Definition of terms

In Australia, Fraser (n.d) citing Barry and Jones (1999) claims the terminology underpinning the "skills agenda" is used loosely with terms such as generic, core, key, transferable competences, skills, attributes or capabilities which are used interchangeably. Stephenson (1998) states capability is "fitness for specified purpose" (p 3). Bowden et al (2000) refer to capabilities as being beyond disciplinary knowledge or technical knowledge and as a preparation to be "agents for social good" in an unknown future. Capable people "not only know about their specialism; they also have the confidence to apply their knowledge and skills within a varied and changing situation and to continue to develop their specialist knowledge and skills long after they have left formal education… Taking effective and appropriate action within unfamiliar and changing circumstances involves ethics, judgement, the self confidence to take risks and a commitment to learn from the experience" (Stephenson 1998 p 3). These people have the ability to integrate knowledge, skills, personal qualities and understandings in their personal and professional lives. Their capability can be observed by their confidence and ability to: take effective and appropriate action; explain what they are about; live and work effectively with others; and continue to learn from experience as individuals and in association with others in a diverse and changing society (Stephenson 1998). Fraser defines 'knowledge' as "acquaintance with facts, truths, or principles, as from study or investigation"; 'skills' as "proficiency or dexterity acquired / developed through training or experience" (Fraser n.d. p.1). Skills might be professional or generic and relate to applying a specialisation and performance in the workplace. The following diagram (Figure 1) represents our understanding of these terms.

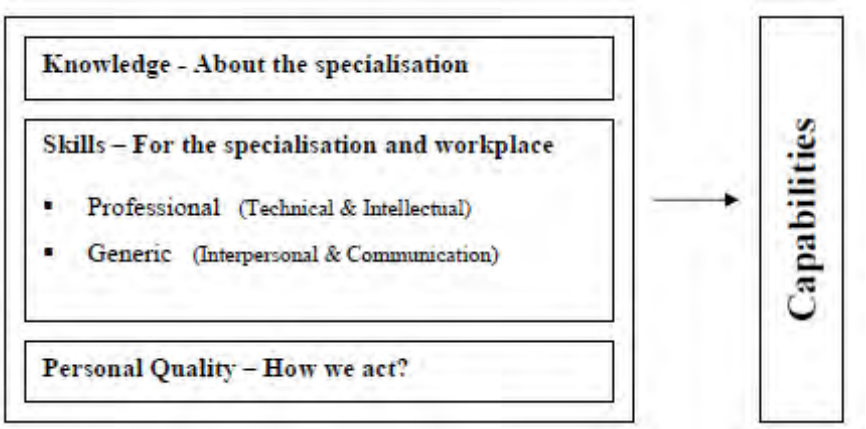


Figure 1. **Capabilities diagram**

Existing capabilities for planning

How do the CCA skills identified in the study map onto those that are commonly identified as useful for planners? Kitchen (2007) identifies a range of skills that he argues are useful for practicing planners: technical skills, such as design negotiations and environmental impact assessment; process skills, understanding highly sophisticated governmental processes; place skills, understanding the nature and modes operation of places; customer skills, understanding who they are working for and how these people's needs can best be met; personal skills, because face-to-face interaction is a big part of the job; organisational, managerial and political skills, because planning is inevitably delivered in an organisational context; finally, synoptic and integrative skills, being able to stick with the big picture and seeing all of the other skills as working towards a whole. These broad sets of skills are reflected in both the Planning Institute

of Australia's core skills and the New Zealand Planning Institute's core competencies that planning courses need to provide to gain accreditation in each of the countries (PIA, 2002; NZPI, 2009), albeit with differences in emphasis in each Institutes.

Methodology

The research approach is divided into five research activities with a brief summary of the methodology of each below:

1 Seventeen in-depth interviews of senior employers from government, tertiary, community and industry sectors were carried out. Questions asked at the interview were divided into three sections: background information on the organisation, organisational response to adaptation and graduate skills and knowledge required by future employees. Participants were chosen based on their seniority in their organisation to guarantee their involvement in recruitment activities and their dealings with adaptation issues on a daily basis. Given the relatively small number of research participants the research focus was qualitative rather than quantitative. The in-depth interview approach succeeded in drawing out specific ways in which graduates could be taught the necessary capabilities required for their future roles as employees in devising and implementing adaptation strategies. The discussion in this paper focuses more on those interviewees involved in planning related work.

2 A literature review and desktop survey of nationally and internationally identified professional capabilities in adaptation was done by searching for academic articles in the area of adaptation in a workplace context and articles on capabilities likely to be needed by graduates in dealing with an uncertain future. A desktop review was also undertaken of tertiary courses in adaptation.

3 A desktop survey of positions, advertised both nationally and internationally, requiring capabilities in climate change adaptation. A total of thirty-seven jobs that included 'climate change adaptation' and 'climate change' in their titles were collected and sorted over two months in 2009.

4 A formal review of the undergraduate and postgraduate planning programs offered at Macquarie University was undertaken, focussing on climate change and adaptation content. All 'required' or 'elective' units in the Bachelor of Planning were searched for inclusion of the words 'climate', 'atmosphere', 'greenhouse', 'atmospheric', 'global', 'weather' and 'environment'. All postgraduate environmental planning degree units were analysed for any mention of 'climate change', 'climate change adaptation' or 'global warming' – in unit learning outcomes, unit descriptions, class activities, assignment specifications or references. A parallel analysis of the GSE postgraduate coursework units has been done to identify the generic capabilities relevant to professional work in climate change adaptation as identified in the in-depth interviews of employers and consultants.

5 A mapping exercise involving a gap analysis was carried out comparing the adaptation-related capabilities required by employers, and capabilities developed in existing offerings in the planning programs at Macquarie

Results Summary

The aims of the first three research activities broadly seek to give different perspectives to the same general research question. The results detailed below from each of the first three research activities broadly complement each other and are highly relevant to other institutions and planning organisations. The fourth research activity stands alone as a program review and is most helpful to Macquarie University, however the methodology used is potentially useful to other institutions as is the opportunity for institutional benchmarking. The fifth research activity brings together information from the first four sections to give new strategic directions to Macquarie University's planning program's design and capability development. This may highlight to other institutions similar gaps offering potential for new directions in climate change adaptation in planning programs. The mapping process used to analyse gaps offers a systematic method to manage complex data.

Results of the in-depth interviews - graduate capabilities in adaptation

High-level intellectual skills, particularly strategic and creative thinking, were considered the most important graduate skills for graduates when dealing with adaptation issues, followed by communication skills. Table 1 shows the skills ranked by nine of the seventeen research participants; eight chose not to rank skills. Intellectual and technical skills (described in this paper as professional skills) related to the field of adaptation were particularly valued by some employers (three out of nine research participants ranked these of equal importance), as was the ability to work across disciplines (described under the generic skill group).

The importance of generic and professional skills was stressed over and above any specific technical skills in adaptation. The majority of respondents considered interpersonal, communication and personal skills to be generic attributes that are required by *all* graduates, no matter what their role. The requirement for skills varied according to the role of the position as indicated in Table 2 below. There are a variety of roles in climate change ranging from regulatory (concentrating on carbon accounting and mitigation), design adaptation and visioning, to community awareness raising and developing community resilience. Graduates dealing with adaptation will in most cases be doing this work within the context of other broader positions such as in the area of sustainability or environmental planning. This is reflected in the findings that, although desirable, skills in adaptation were not considered essential by the employers participating in this research. Employers identified a number of additional skills and knowledge as being of relevance to developing capabilities in any future adaptation roles and these are listed in Table 3 focusing on knowledge areas and Table 4 focusing on skills. Knowledge areas have been grouped according to core and additional knowledge areas. Table 4 has clustered the skills according to Table 1 and Figure 1 categories and prioritised them for planners. They offer a helpful checklist for a measure of suitability to graduates seeking this type of adaptation related work.

Table 1 **Ranking of skills by nine research participants according to their importance**
(The numbers in each category do not total nine as some skills were ranked equally and two participants only ranked their three most important skills.)

SKILL SET	Most important	2nd most important	3rd most important	4th most important	Least important
Intellectual (Professional) Strategic thinking Policy formulation Lateral and creative problem solving Analytical skills	5	1	3		
Interpersonal (Generic) Work across disciplines in multi-disciplinary teams develop and foster relationships with stakeholders Sensitive to varying perceptions of CCA issues and the need to engender hope Negotiation and conflict management skills Able to be a 'change agent' in an organisation	2		3	2	
Communication (Generic) Write and speak about the importance and nature of the CCA issues to a diverse range of stakeholders	1	5		3	1
Technical (Professional) Data interpretation from a range of sources and disciplines Extrapolation to future impacts and vulnerabilities to the locality/ sector Discipline related skills such as vulnerability mapping; GIS skills; materials assessment, applying adaptive environmental assessment and integrated environmental management systems	3	1	2	1	1
Personal Resolve to make decisions despite uncertainties about local climate change impacts Personal integrity and ethical behaviour Global perspective Able to prioritise actions		1	2	1	4

Table 2 Planning related employment roles and relevant skills

Employment role	Organisation	Most important skills required
Policy	DECC	Intellectual – strategic thinking; communicating technical knowledge to end users; interpersonal
Consulting	GHD, Urbis	Intellectual; able to work across disciplines
Planning	Landcom	Strategic approach; able to apply planning policy; understand technical issues e.g. use jargon correctly

Table 3 **Knowledge for climate change adaptation**
(The bracketed numbers indicate the number of research participants who mentioned those skills.)

Main knowledge areas cited	**Additional knowledge areas cited**
Basic Science of climate change	understands and can explain climate change jargon (2) understands the theory, drivers and causes of CC
Policy initiatives and current strategies to deal with CCA	- understanding of the national greenhouse reporting scheme, emissions trading scheme - understands the political landscape and whether policies will be acceptable - aware of carbon inventory and modelling; what's happening in global markets etc - recognises perceptions/ worldviews of communities (international perspective) (2) - aware of alternative policy initiatives e.g. soil carbon sequestration - understands the role of green energy technology in adaptation
Significance of the climate change problem e.g. issues /activities affected by CC	- aware of the new carbon economy, including carbon inventories
Principles of sustainable development, features of sustainable systems, systems theory and complexity of interactions and linkages within varying socio-economic and physical contexts	- understands environmental economics - understands the principles of regenerative as well as sustainable systems e.g. carbon farming
IPCC reports e.g. likely impacts of CC on agricultural production, water security, human health, ecosystems, CCA terms and jargon etc	- aware of national/international contexts
Barriers and opportunities in managing impacts such as barriers and attitudes to change including drivers of change	- aware of the 'playing field' for political decision making - understands differences in perception between planners, engineers etc. - understands how decisions are made in a political context - aware of bureaucratic impediments to adaptation - understands what's needed by young people to cope with CC in the future
Vulnerability indicators e.g. physical, biological, demographic, institutional	
Risk assessment methodologies	
Legal implications of CC e.g. contracts, likely regulatory changes	- aware of relevant legislation on a global and local scale

In regard to knowledge and skills required in adaptation related positions, the results showed that knowledge in adaptation is important to employers from each of the various sectors, but with different emphasis. From a state government policy perspective, there is a need for employees to understand the technical aspects of adaptation and then the ability to translate that to operational staff. In other words:

> *What is needed are people who can encourage people to do things, who need to convince others of the resources, time and effort required to bring about adaptation* (State government employer).

A second state government employer added that a "more strategic approach than currently adopted" to adaptation via a longer-term perspective is needed. Understanding and applying planning policy and being able to justify decisions accordingly was also considered important, as was the "ability to build and maintain new relationships with a new set of climate change specific stakeholders".

Table 4 **Additional skills mentioned by research participants**
(The bracketed numbers indicate the number of research participants who mentioned those skills.)

Professional Skills - Intellectual	**Professional Skills - Technical**	**Generic Skills - Interpersonal - Communication**	**Personal skills**	**Ranking for planners**
able to undertake research (2)	able to use visioning techniques for future scenarios – 'brain busters' (3)	able to influence stakeholders through using existing networks	has personal resilience	**Very Important**
able to employ observation and analysis skills simultaneously	able to undertake project management and feasibility assessments (2)	able to develop partnerships between stakeholders	has leadership qualities	
able to breakdown sustainability into multi-disciplinary areas	able to develop action plans	recognises inter-linkages	able to make informed decisions under extreme uncertainty	
able to deal with a huge level of complexity in regional changes e.g. what industries will be affected? How important is sea level change compared to other changes?	able to identify needs and benefits for the community of adaptation strategies			**Quite important**
able to monitor and evaluate adaptation strategies	able to analyse environmental impact assessments in relation to CC			
able to contribute to policy development	able to write grant applications			
able to prioritise social issues e.g. turning off a TV, food shortages, inundation resulting in mass migration	able to design strategies/tools to combat CC			
able to prioritise the significance of CC changes for particular organisations	able to assess the economic impacts of CC on the community and company liability			

Within local government, employers indicate that multi-disciplinary skills are important, as well as, the ability to making decisions despite uncertainties. Varying degrees of expertise would be needed according to the nature of the employee's role. One participant considered that interpersonal and communication skills were of most importance given that local government

engages more than other levels of government with the local community, who will need direction and reassurance in the future in the area of adaptation. It was also felt that technical expertise could always be acquired if necessary for the role. One participant commented that councils are being driven internally, as well as by their communities, on the issue of climate change. Another reported that vulnerability assessments are not currently a policy directive, but will be important for the future.

One participant added that graduates need to be able to apply Ecologically Sustainable Development (ESD) skills in a meaningful way, as interdependencies were often neglected. For example, social, economic and environmental triple bottom line reporting shouldn't be compartmentalised; furthermore, a method is needed for assessing non-monetary issues such as aesthetics, values and quality of life.

Private sector consultancies (from four planning related organisations) give priority to graduates with highly developed intellectual skills, with strategic thinking being particularly valued and often difficult to find in new graduates. Interpersonal skills are also needed to run focus groups and design charettes. Other personal qualities are seen as important, for example, one consultancy in particular "seeks driven, independent thinking, and self motivated people that can make the most out of our organisation".

The graduate is usually employed to fill a particular niche or role in a balanced team with a mix of skills e.g. a team could comprise urban planners, GIS specialists (etc). A strong technical background in a number of disciplines such as natural resource management, systems science, water, risk assessment etc. is also highly regarded. Other desirable technical skills mentioned included flood and water cycle modelling for new climate scenarios; applying passive design to innovative solutions for "liveability in communities" and the ability to apply green energy technology appropriately. An understanding of social as well as technical issues would "hold a candidate in a lot better position than one without" according to one consultant. A list of additional knowledge areas mentioned by employers is also shown in Table 3.

Results of the literature review and desktop survey: adaptation skills and courses

This part of the research revealed a paucity of literature on graduate skills for adaptation, although many reports on strategies for adaptation are becoming available. There were a number of articles that dealt with graduate capabilities for an uncertain future that shed light on the challenges to be faced by tertiary institutions in training adaptation practitioners for the complex workplaces of an uncertain future.

The complexity surrounding the implementation of adaptive management and policies by organisations is well explained by Swanson *et al (2006)*. The importance of experimentation, creativity, dealing with people and being open to new ideas is considered critical for successful implementation of the above. If adaptive actions and strategies are to be effective they will need to be able to respond to dynamic conditions, thus mirroring natural systems:

> *"As science demonstrates, the foundational and persistent elements of our world are not objects or structures but forces and relationships, so adaptive policies need to address dynamic interactions between organisations, people, and the world around them" (* Swanson *et al 2006 p 29).*

Planning for adaptation is fraught with uncertainty and complexity, so that dealing with an uncertain future requires both discipline-specific knowledge and skills, and skills that are non-

discipline specific such as being able to work across disciplines in multi-disciplinary teams. Such skills also include being able to engender hope, inspire others and the ability to make decisions in the light of uncertainty. The importance of generic, often personality based, capabilities cannot be underestimated when preparing graduates to deal with adaptation. As noted by Cherry (2005 p 312) (and developed from the work of Schon), 'relentless physical and social change is as much an emotional and spiritual experience as it is an intellectual one'.

Dealing with change requires a level of maturity that graduates may not have; developing that maturity requires inner resources that may be difficult if not impossible to teach. The essential question for university educators in the area of adaptation becomes: how can graduates be prepared for new situations where data might be ambiguous or lacking and where the boundaries between discipline and knowledge areas are blurred?

To engage helpfully with this complexity is to sometimes challenge the fundamental paradigms and disciplines which define and organise what we think we 'know' and can 'do'. Conceptually, this means being able to bring multi-disciplinary perspectives to bear on issues and possibilities, and to think outside the existing boxes altogether in order to invent new ones (Cherry 2005 p 311).

The wide-ranging nature of skills and knowledge required by graduates in adaptation was demonstrated in reports on the Sydney Coastal Councils Group's vulnerability to climate change (Sydney Coastal Councils Group 2008). Their research, in collaboration with the CSIRO and the University of the Sunshine Coast, was funded as part of the *Systems approach to regional climate change adaptation strategies in metropolises* project funded through the Australian Government Department of Climate Change. The reports portrayed very well the incredible complexity of relationships and political realities impinging on negotiating adaptive solutions to adaptation amongst stakeholders (Sydney Coastal Councils Group 2008).

Results of the desktop survey: advertised positions in adaptation

Many of the positions advertised desired planning-related skills, such as strategic planning, good communication and skills in stakeholder collaboration, even if a planning degree was not specified. These positions, such as "climate change adaptation project manager", would be suited to a planner who specialized or majored in climate change subjects. The scientific knowledge and professional skills required for some of these positions may restrict a planning graduate from many Australian planning programs and under the Planning Institute of Australia's current education guidelines. This is an interesting area for consideration given that the generic skills required for these climate change adaptation positions closely match a planner's ideal skill set.

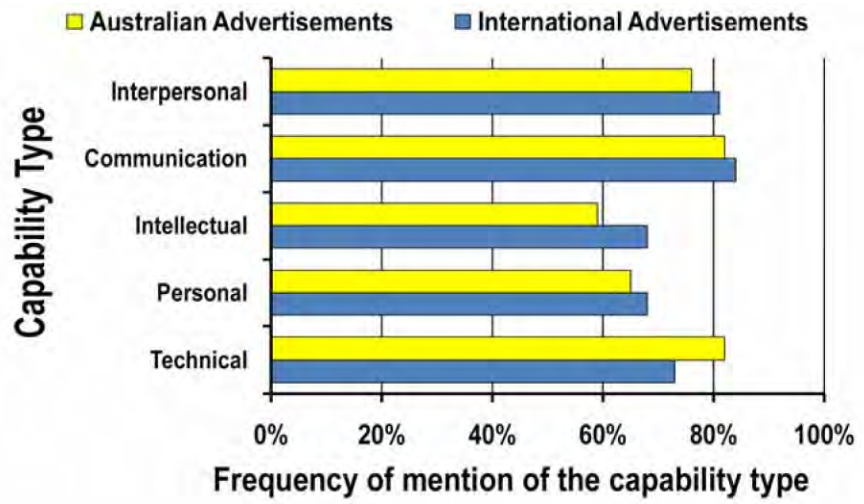
As can be seen in Table 5, the two main groups of capabilities most required by employers in the first analysis were related to communication and interpersonal skills, which may relate to the multi-skilled and multi-personal nature of tackling the unpredictability of climate change adaptation. However, when looking at positions that specifically required a climate change adaptation 'officer', interpersonal skills were substituted for more technical ones, but communication skills were still the highest priority.

Table 5 Summary of capabilities required

('Title' groups all the positions which contained climate change adaptation in the title, whereas '*Not Title'* describes all the others)

	Technical	Personal	Interpersonal	Communication	Intellectual
Title	11/14 (78%)	7/14 (50%)	10/14 (71%)	12/14 (85%)	9/14 (64%)
Not Title	17/23 (74%)	17/23 (74%)	20/23 (87%)	19/23 (83%)	16/23 (70%)
Total	28/37 (76%)	24/37 (65%)	30/37 (81%)	31/37 (84%)	25/37 (67%)

Figure 2 Frequency of citation: Five types of generic capabilities in Australian and international job advertisements



Using analysis involving a count of skills mentioned, the job advertisements reveal that the most important skills that adaptation professionals will need are, generic capabilities such as intellectual, communication and interpersonal skills. This is consistent with the nature of professional work in adaptation that involves dealing with complex situations in varying social and physical environments and also with the wide range of roles that adaptation professionals will be undertaking in the future. Some interpersonal skills required, such as being able to engender hope, are perhaps somewhat unique to working in adaptation and will require a level of maturity most likely to be found in mature age or Masters students.

Interestingly in a consideration of these results it became apparent that the first analysis of data (and the methodology) from the job advertisements did not include consideration of the qualifications required for each job. In the case of the international jobs there was an overwhelming demand (83% of advertisements) for candidates to have advanced training (including postgraduate qualification or Bachelors degree with minimum 5 years experience in the field). This was an indication of the assumed intellectual nature of the position. In national jobs it was less pronounced with 74% requiring an undergraduate degree as a minimum qualification. The qualifications specified for the adaptation-related jobs advertised are shown in Table 6.

Table 6 Qualifications required by employers in job advertisements.

*Advanced: Masters, PhD or Bachelors with minimum 5 years experience

Jobs advertised	Advanced*	Bachelors level only	All University qualified	No requirement
National	4 (27%)	7 (46%)	11 (74%)	4 (27%)
International	30 (83%)	2 (5%)	32 (88%)	4 (12%)
All jobs searched	34 (66%)	9 (18%)	43 (84%)	8 (16%)

Table 7 Summary of capabilities required in a selection of advertised international jobs (with adjustment)

	Technical	Personal	Interpersonal	Communication	Intellectual
Title*	11/14 (78%)	7/14 (50%)	3/4 (75%)	10/14 (85%)	9/14 (64%)
Not Title	17/23 (74%)	17/23 (74%)	20/23 (87%)	19/23 (63%)	16/23 (70%)
Total	28/17 (37%)	24/37 (65%)	30/37 (81%)	31/37 (84%)	25/37 (67%)
Total *with adjustment*	*+20%* 96%	65%	81%	84%	*+20%* 87%

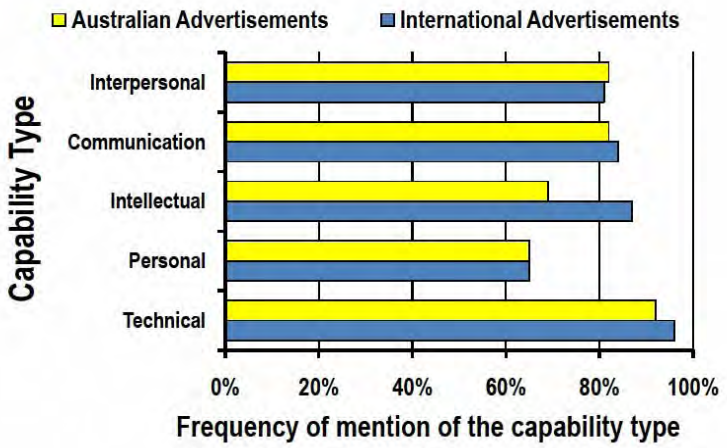
*__"Title"__ groups all the positions which contained "climate change adaptation" in the title, whereas __"Not Title"__ describes all the others

Table 8 Summary of capabilities required in a selection of advertised national jobs (with adjustment)

	Technical	Personal	Interpersonal	Communication	Intellectual
Title*	3/4 (75%)	3/4 (75%)	3/4 (75%)	4/4 (100%)	2/4 (50%)
Not Title	11/13 (85%)	8/13 (61%)	11/13 (85%)	10/13 (77%)	8/13 (61%)
Total	14/17 (82%)	11/17 (65%)	14/17 (82%)	14/17 (82%)	10/17 (59%)
Total *with adjustment*	*+10%* 92%	65%	82%	82%	*+10%* 69%

*__"Title"__ groups all the positions which contained "climate change adaptation" in the title, whereas __"Not Title"__ describes all the others

Figure 3 Frequency of mention of the five types of generic capabilities in Australian and international job advertisements with adjustments to incorporate qualifications required



In addition to the previous point regarding the generic emphasis (still argued to be valid) the readjusted results emphasize a further point, which is that both knowledge and high-level intellectual and technical skills are required. This is indicative of the complexity of adaptation related work and the higher level thinking skills needed and is especially apparent for the climate change and adaptation jobs researched on the international market. The technical capabilities are of key importance in both the Australian and international job markets. In the Australian job advertisements, technical capabilities requested are considerably higher than intellectual capabilities. This emphasis on technical ability and skills for adaptation needs to be transferred to the educational context, reprioritizing practical, technical tools and systems to assist in higher level thinking.

The re-analysis of the data on adaptation-related jobs advertised included the categorisation of types of roles into categories making it clearer which positions are suited to planners or similar to planning jobs. Some job advertisements requested that the candidate be able to carry out several types of role in the one position. Table 9 shows the categorisation of types of roles indicated in the advertisements, from the most sought to the least sought after type of role.

Table 9 shows some interesting results, including the project manager and leaderships roles being the most highly-sought after roles in both national and international jobs. The roles that involve carrying out risk-assessments and being politically aware – including being a change agent and competent at public communication – were far more common in internationally advertised positions than in national positions. Advisory positions were more common nationally than internationally.

Table 9 Roles required by employers in job advertisements

Roles	International	National	Total
Project Management	13	9	22
Leadership	9	5	14
Risk Assessment	12	1	13
Politics – change agent and public communication	12	1	13
Research	8	3	11
Advisory	4	5	9
Policy	7	1	8
Strategic Management	3	2	5
Education	1	1	2

It is interesting to note that this data is now more closely aligned with the results from the interview data. It is clear that technical expertise in adaptation strategies and assessment methods, such as vulnerability mapping and risk analysis, are also highly valued. This is particularly so for planners with the recent release of the NSW Department of Environment, Climate Change and Water's *NSW Sea level rise policy statement (*NSW Department of Environment, Climate Change and Water, 2009d) and accompanying coastal and flood risk management guides, (NSW Department of Environment, Climate Change and Water 2009a, 2009b, 2009c, 2009e). Also relevant is the NSW Department of Planning's recently released *Draft NSW Coastal Planning Guideline: Adapting to sea level rise* (NSW Department of Planning 2009).

Discussion

The all-encompassing and complex nature of the climate change issue is recognised by employers who will require future employees to have an interdisciplinary and multidisciplinary approach to their work. This will require employees who have been exposed to team-based creative problem solving in their tertiary studies.

Personal capabilities of resilience and hope in the face of daunting challenges in relation to climate change, expressed in practice as bringing about behavioural change, may be difficult to teach, but their importance should not be underestimated when considering how best to educate the adaptation practitioners of the future.

When considering the expectations of employers of planners it is clear that some further skills in climate change adaptation are considered important, although perhaps, not absolutely essential. Generic capabilities required, such as the ability to work with stakeholders, communications skills and strategic thinking are graduate competencies aimed for in many planning programs across Australia. If they are effectively taught to a very high level, then planning graduates are already partially equipped for adaptation roles. There are a further group of advertised positions that may suit planners

who specialize in climate change in their studies and who have obtained further scientific and technical knowledge to complement their more "traditional" planning skills. Technical skills are important, and higher level thinking skills especially so, for the international climate change

adaptation job market. Positions such as these, as recognised by the employers, are most suited to postgraduates, and education institutions need to ensure postgraduates have these higher-level abilities. This point is further developed in the next section.

It is evident from current government investment and the global pressure (indicated by political pressure within the United Nations that there will be a growing need for planners with skills in adaptation. While currently there is little mention of climate change in Australian legislation and no mandatory duties on local councils in that regard, councils are required to *consider* climate change impacts and potential preventative and adaptive behaviour in a number of local environmental plans and decision-making processes (Ruddock, 2008). Forward thinking councils should be adopting the precautionary principle consistent with ecologically sustainable development (ESD) and implementing the appropriate use of planning mechanisms including buffer zones in local environmental plans (LEPs), restrictive zoning, acquiring properties facing new climate change related risk, amending development control conditions to include setbacks (etc) as well as adopting clear climate change policies (Ruddock, 2008). There is a need for State government guidelines to assist councils in setting benchmarks for strategic planning in relation to coastal hazards and in providing guidance on when and how to conduct adaptive activities. It should be noted that NSW State Government guidelines for assessing the impact of sea level rise on coastal development and floodplains are now available in draft format (NSW Department of Planning 2009).

In summary, from these research activities it is argued that most planners will now need climate change adaptation skills in their capability portfolios, although, arguably it is still not absolutely essential according to employers needs. If one considers the recent government policy trends there is further indication that it will be. There is also perceived to be, a small niche market for adaptation specialized graduates. In regard to knowledge content, focusing on teaching the *translation* of the theory of adaptation into a process that would have more practical implications for the workplace is recommended. The emphasis should be on professional practice and technical skills such as vulnerability assessment, building community resilience and systems thinking. In regard to learning and teaching strategies employed, teaching students how to deal with, and plan for, uncertainty is a key new challenge. The practices recommended in Education for Sustainability (Cortese, 1999; Tilbury and Wortman, 2004; Wheeler, 2007) may have some broader application, especially for planning educators. The need to maintain confident positive approaches is important for maintaining motivated students and professionals. Teaching approaches for this type of work can present a challenge, given both the complexity of the issue and the size of the challenge of climate change and adaptation responses. A case study approach dealing with current examples from practice and alternative multiple scenarios could be used. Case studies could range, for example, from developing adaptation policies, initiating behavioural change in communities, redesigning urban areas, building social networks, developing resilience or conserving natural resources. Given the overwhelmingly broad discipline areas on which CC will impact in the future, it would seem imperative that students have experience in working with other discipline areas throughout their tertiary training. Further, work-related practice could provide an important strategy for Masters students, in particular, to work within organisations on adaptation projects which would solve a resourcing problem for the organisation and provide valuable work integrated learning for the student.

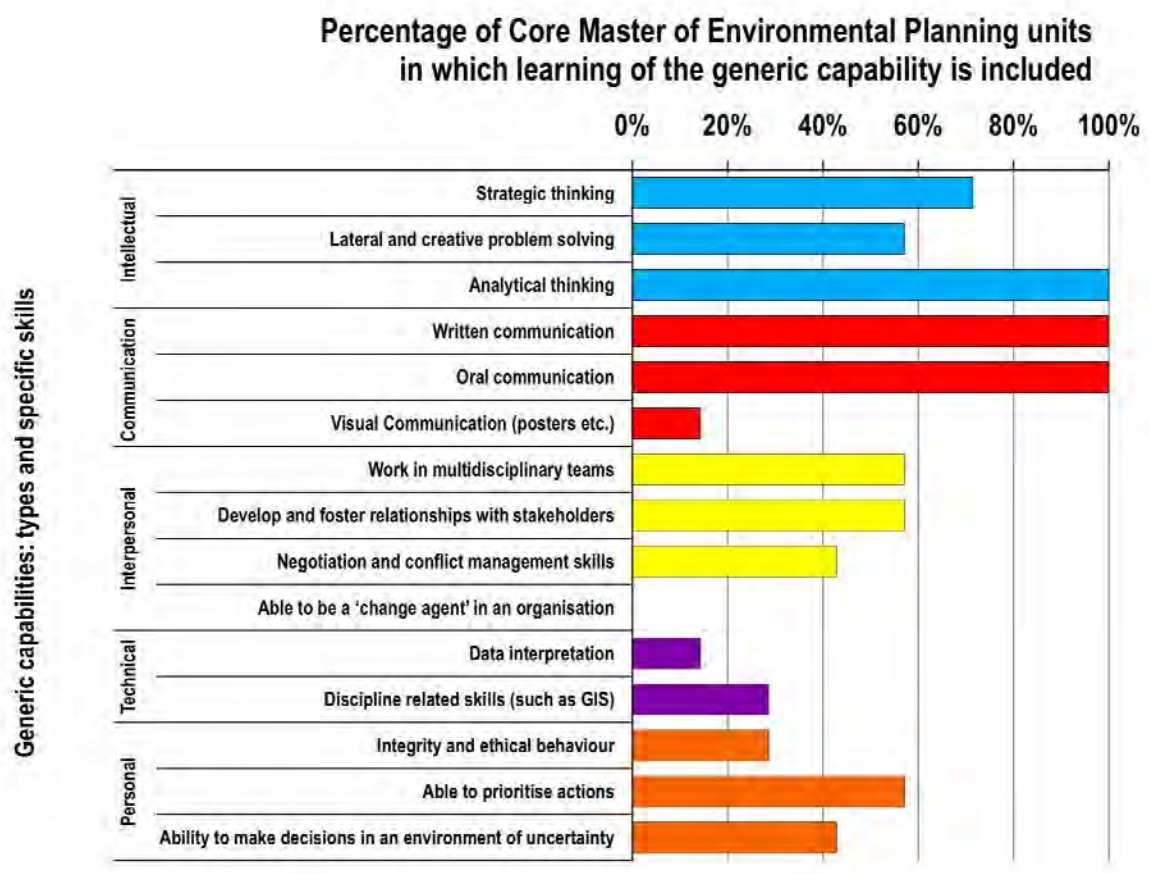
Results of the review of the Macquarie University planning programs

In the review of the Macquarie University planning programs, the content was examined for

topics covering the areas of 'climate change', 'climate change adaptation' and 'responses to climate change'. The results show that in the postgraduate program these topics are treated significantly (50%) (as measured by the number of times the phrases are used) in one core unit, and briefly in eight other postgraduate units in the Master of Environmental Management and Master of Environmental Planning programs. Analysis of postgraduate units in environmental planning also show there is substantial emphasis on students learning in a number of the generic capabilities identified in the employers' preferred capabilities for adaptation as important for professionals working in adaptation (refer to Figure 4).

The Bachelor of Planning is a largely prescribed program (made up mostly of core units required by PIA) with some coverage of different aspects of climate change and adaptation in several of the required units and through one option for a more climate change specific unit. Options for further individual student development in climate change adaptation are available by choice, such as in the planning design project that acts as a capstone function for the project. There is scope for further adaptation integration, but always involves a trade-off of other key knowledge.

Figure 4 Generic capabilities in postgraduate coursework units



Results of gap analysis at Macquarie University and the development of programs, units, modules and class activities

A gap analysis indicated where adaptation-related gaps exist in Macquarie planning programs when compared against research findings already mentioned in this paper, including both the capabilities listed and the priority given to that capability. The key areas for focus are shown in Table 9**.**

Table 9 Capabilities needing further development in the reviewed Macquarie programs or units

Category in priority of importance	Capability
Technical	Discipline-related skills: e.g. Mapping; GIS; modelling, CC jargon etc.*
Intellectual	Strategic thinking
Interpersonal	Negotiation and conflict skills
Personal	Able to be a change agent

* Most of the discipline-related skills are included in some undergraduate units that will be studied by some students however they are not included in any of the postgraduate units – rather it is assumed that students will learn them as necessary in the context of assigned work.

Discipline-related technical skills are the most sought after capabilities in the advertised positions both internationally and nationally. A broad range of skills has been listed as relevant to the field of climate change; some may be able to be treated in modules such as 'climate change adaptation for planners' but not be applicable to all graduates in the field.

- Risk assessment/ management skills
- Capability to translate technical into operational
- Discipline-related skills e.g. mapping, GIS and modelling skills
- Computer skills
- Environmental auditing
- Understanding climate change jargon
- Developing action plans
- Completing grant applications
- 'National Greenhouse' reporting
- Planning for uncertainty
- Ability to go beyond theory to structural processes that deliver change

Strategic thinking skills are highly sought after by employers and need further development in program offerings, more so in environmental management than environmental planning at the postgraduate level. These need further development in the undergraduate planning program. Within the highly prioritised intellectual category, a number of specific areas of application have been identified:

- Translating science into policy
- Dealing with complexity
- Project management
- Visioning future scenarios

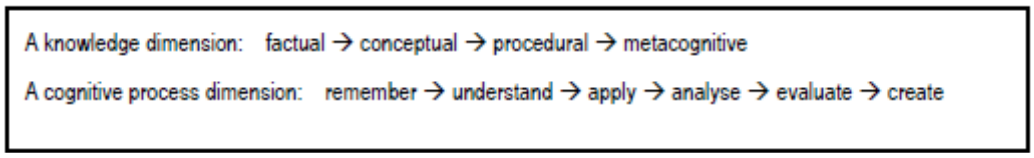
- International awareness
- Systems thinking
- Understanding beyond theory to the structural processes

The interpersonal skill of working in teams is included, especially in postgraduate planning units. There is further scope for the inclusion of others, particularly those in negotiation and conflict management. While personal capabilities overall were not rated as important as other capabilities, the specific 'equipping graduates to be a change agent in an organisation' is highlighted as one which could receive more attention. Interestingly it was identified as a frequent role in international positions, along with political awareness and good public communication skills.

A framework has been developed to guide the development of undergraduate and postgraduate programs, units, modules and class activities that will contribute to the preparation of students for future professional work in climate change adaptation. The framework is based on a new taxonomy for learning, teaching and assessing (Anderson and Krathwohl, 2001). Essentially it allows the location of any particular knowledge in this case climate change knowledge to be taught and learned in a 'cognitive space' defined by two dimensions: the knowledge dimension and the cognitive process dimension (as described in Figure 5.)

A knowledge dimension: factual Ž conceptual Ž procedural Ž metacognitive A cognitive process dimension: remember Ž understand Ž apply Ž analyse Ž evaluate Ž create

Figure 5. **Knowledge dimensions**



Each level, in each dimension, subsumes the preceding one. For example the cognitive process of applying conceptual knowledge to a problem or issue assumes that the student has already remembered and understood underlying facts around the problem or issue. The content of units and modules or activities within them, need to be designed so that as students advance through their undergraduate studies (and on into postgraduate coursework) so that there is progressively greater emphasis on higher levels of learning about climate change in both dimensions (see Figures 5 and 6).

Figure 6 The progression to higher level thinking about climate change and climate change adaptation through undergraduate to postgraduate study

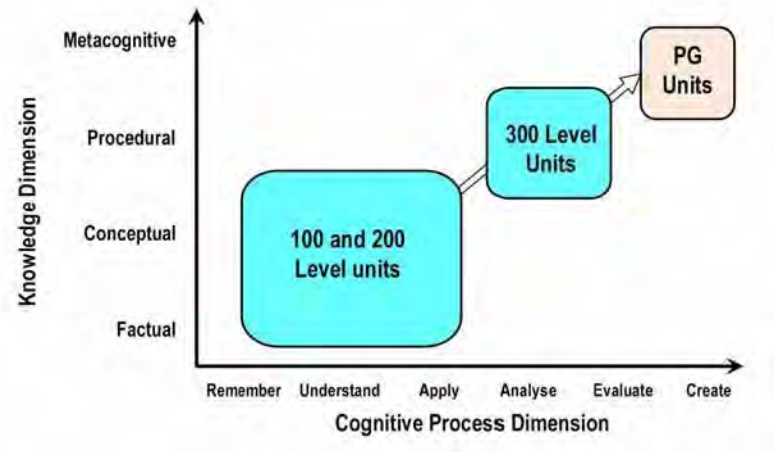


Figure 6 is not meant to imply that higher level thinking skills should not be learned in 100 and 200 level units. Rather it is meant to indicate an increasing *emphasis* on higher level thinking skills – specifically in relation to climate change adaptation – to be learned and then assessed as students progress through their undergraduate study to postgraduate coursework study. Although the framework has been developed specifically in the context of teaching and learning about climate change and climate change adaptation in the Faculty of Science, it can be applied to other disciplinary areas[3].

Given the results of the international job market analysis prioritising high-level intellectual and technical skills, it is interesting that approximately 33% of Macquarie University's postgraduate planning students are international students compared to only 5% of undergraduates. Following the aforementioned framework, the thinking skills being developed and the complexity taught at the postgraduate level is effective for equipping international postgraduate students for the climate change adaptation international job market.

Conclusion

New capabilities in climate change adaptation for planners

Using Kitchen's (2007) typology of planning skills it is clear from our study that climate change adaptation will require planners to develop capabilities including broadening their knowledge base and developing skills for this type of work. Firstly, new knowledge in the use of climate change terminology, the basic science and drivers of climate change and the economic and social impacts of climate change adaptation will be necessary. Secondly, a climate change adaptation orientation to existing skills sets such as environmental impact assessment including risk assessment and vulnerability mapping will be required. Thirdly, climate change adaptation, its drivers and its effects will force a more regular application of broad place skills such as stakeholder relationship management and a greater understanding of the complex effects of change in places. Finally, climate change adaptation means that planners' synoptic and integrative skills will be challenged by the need to come to decisions 'under extreme uncertainty'. Although working with and reducing uncertainty has always been part of a

[3] In addition to the science of climate change and associated 'technical' capabilities (such as data interpretation and GIS) effective professional work in climate change adaptation will entail knowledge and capabilities across many disciplinary areas in the social sciences, health sciences and management.

planner's role, the extreme uncertainty related to climate change is well outside planners control especially at a local scale. Thus, the 'bigger picture' that planners have to be aware of as they work is being constantly redefined as findings emerge in the latest IPCC and CSIRO reports among many other studies. These are then communicated and reinterpreted through societal filters such as media sources and political views presenting planners with communication challenges. Thus, planner's integrative skills will also require them to be flexible, open and highly critical in the face of rapidly changing understandings of the impacts of climate change and what adaptation requires.

New themes arising in teaching and learning in planning education

It may be argued that planning graduates are generally well positioned for climate change adaptation with basic generic skills such as working with stakeholders, having good communication skills and strategic thinking and/or planning skills already being taught in most Australian planning programs (and demanded in PIA education policy requirements). This research into Macquarie University programs has raised the difference between equipping students with knowledge in these areas and the development of skills for this type of work. It also presents challenges for greater breadth of knowledge relating to climate change and depth of skill development especially professional skills. According to Anderson and Krathwohl's (2001) 'knowledge framework' (described earlier), the complexity of adaptation issues and the required raft of professional capabilities, especially professional skills (intellectual and technical), are best taught and learnt at a postgraduate level. Planning graduates are best equipped for employment in adaptation-related positions when working at the metacognitive level of learning, and using high level strategic and creative thinking skills. Adaptation planning for and with uncertainty is mentioned as an adaptation capability in several areas of this research, and the task of teaching this added layer of complexity needs careful consideration, especially for undergraduates. Work-integrated learning plays a key role in filling in this potential gap as does a conscious re-emphasis on skill development sessions and professional practice workshops to accompany theoretical approaches. The teaching ideas and methods proposed by Cherry (2005) embrace bold, positive approaches which help build resilience and student confidence. Teaching for adaptation, including visioning of multiple futures, ought to apply systems thinking to multiple scenarios using case studies and incorporating multi-disciplinary teams. Other institutions could benefit by critically reflecting on Macquarie University's findings.

Questions and ideas that may arise from a critical reflection:
- ⁀ We can teach what strategic planning is, but are students given the opportunities to explore how to do it?
  - o For instance the steps and skills needed to actually do strategic planning.
- ⁀ What are the differences between strategic planning, strategic thinking, creative thinking and systems thinking?
  - o How are these differences conveyed and how are the necessary skills taught through teaching approaches?
- ⁀ What are steps that would develop skills to help build stakeholder relationships in areas of conflict resolution or issue denial? Stakeholder assertions such as "climate change is not real" could be such a situation.
  - o This would require capability development in high level communication and stakeholder relationship building.

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Learning from the Australian Urban Land Use Planning Monitor

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Abstract

This paper reports on the implementation of the online Australian Land Use Planning Policy Monitor. The Planning Policy Monitor was established in 2007, to develop a database on local statutory plan provisions relating to housing and environmental sustainability. It has several teaching and learning applications, discussed in this paper with reference to a sample of 25 student evaluations.

Introduction

Like the first encounter with Shakespeare, reading one ¨s first land use planning instrument can be daunting. It ¨s a shame then, that decoding planning regulation has a reputation for being somewhat less rewarding than deciphering the great sonnets. Not only that, but planning instruments are written in multiple local languages – embedded within a particular institutional and legal framework, and mediated by local policy dynamics. So it is as difficult to generalise about the form of planning regulation – what it looks like, how it is expressed – as it is to generalise about its content – what it addresses, and how. This is an established problem in planning research – how to evaluate the outcomes of regulatory intervention, when the regulations themselves are so heterogeneous as to defy categorization and measurement (Gyourko et al. 2008, Lewis & Neiman 2000)? But heterogeneity in statutory planning systems and instruments is also a problem for planning educators struggling to teach beyond the confines of a particular jurisdiction. How should students learn transferrable skills and knowledge about plan interpretation, evaluation, and development, when actual planning laws and conventions are so locally idiosyncratic?

The Australian Urban Land Use Planning Policy (AULUPP) Survey and ongoing online Monitor was developed to address such problems, although its initial design was for research purposes. Using a broad survey tool capable of generalizing across planning approaches used in different jurisdictions, we sought to quantify local, statutory, planning approaches to environmental sustainability (energy and water performance, urban form, biodiversity conservation) and housing (density, diversity, affordability) (Gurran and Phibbs 2009). The internet based survey was designed to be more than a tool for data capture – by completing the questionnaire, planners are guided through a range of policy goals and related statutory tools for environmental sustainability, housing affordability and choice, that they may not have previously considered. Therefore, the survey was intended to fulfill both educational and policy diffusion goals – planners completing the survey can learn about, and potentially adopt, new tools for sustainability and housing.

These learning applications can also extend to the classroom – by completing the online, interactive questionnaire against a specific local planning instrument, students learn to read through a plan purposively – thus acquiring skills in plan interpretation. By interrogating local planning instruments in search of particular, policy significant approaches, students also develop skills in plan evaluation while engaging in a live research project. For these reasons, we created a shadow AULUPP survey site specifically for student use, but with live data capture capacity. In the context of ongoing pedagogical interest in the research and teaching nexus, this paper discusses our experience in using the AULUPP as an interactive teaching and research tool, and more importantly, the students ¨ own learning experience. The paper briefly outlines some of the debates concerning the teaching / research nexus, before introducing the background to the AULUPP survey, its design, and use in the

classroom. We then report on student feedback and observations, as reported in a sample of 25 student evaluations collected in June 2009. Finally, we reflect on the strengths and weaknesses of the AULUPP survey in the classroom and the potential use of the model as a symbiotic teaching and research tool.

The teaching / research nexus in higher education and in the built environment

Interest in the connections between teaching and research has grown steadily in the higher education sector. Part of a broader movement to enhance the quality of university teaching and the special role of universities in relation to knowledge production and education, a number of specific initiatives both in Australia and internationally seek to foster the research / teaching nexus (Healey 2007). Examples include Australia's Carrick Institute for Learning and Teaching in Higher Education, which funds projects on research-teaching connections, and the UK Higher Education Academy which also supports such initiatives, while academic promotion criteria now routinely refers to research led teaching. However, much confusion remains about what the research teaching connection is or should be, and whether and how it benefits student learning. The prevailing orthodoxy appears to challenge assumptions that good researchers are good teachers but maintains that teaching can benefit from engagement in research activity of some kind (Griffiths 2004).

An influential conceptual model for understanding research engagement in teaching identifies four approaches: 1) "research led", whereby the curriculum is influenced by the research interests of the teacher – which may be highly specialised; 2) "research-oriented", where the curriculum emphasises the research process and develops more generic student skills and knowledge in inquiry as well as learning the outcomes of this inquiry; 3) "research-based" teaching where the curriculum is designed around active inquiry based tasks, rather than more passive processes of content acquisition; and 4) "research-informed" teaching whereby a teacher's pedagogical practice is actively informed by "systematic inquiry into the teaching and learning process itself" (Griffiths 2004, p. 722). In specific reference to teaching and research in relation to the built environment, Griffiths (2004) writes of a research ambivalence amongst both academics (many of whom were once practitioners and value the knowledge process associated with professional practice and innovation) and students, who often have professional goals in mind:

> *The ambivalence about the value of „research¨ among many academics and students is also bound up in an awareness that, in the context of the built environment disciplines, advances in the field of practice are not, by and large, driven by discovery research. They are more usually driven by government policy and by other developments taking place in the field of practice.* (Griffiths 2004, p. 723).

In the context of this discussion, and in relation to our own research and teaching goals, which in the present case seemed to be in marvellous alignment, we decided to directly investigate the student learning experiences associated with participating in the AULUPP research project.

Background to the AULUPP survey

Competency in interpreting, evaluating, and writing land use plans is a fundamental learning objective for students of urban and regional planning. Knowledge of major policy areas and the planning levers for their implementation – regulations for environmental protection or for managing sprawl – must combine with skills in plan writing and interpretation. But developing such knowledge and skills can be overwhelming for students, because land use plans are complex, context specific and diverge markedly across local and

state jurisdictions. It is difficult to develop student literacy in plan analysis, interpretation and writing because skills learned on one set of plans do not easily transfer to others. As we have noted, this is also a research problem – when plans themselves are so divergent, it is difficult to generalise about the content of plans within a region or a nation, let alone their likely or actual impact, without a special purpose research tool.

The policy development and review process itself is generally not engineered to collect this information in a systematic way, although it is assumed that local plans prepared under higher level legislation and policy will be consistent with these broad parameters. Additionally, the plan making process, despite involving scrutiny by higher levels of government, seldom results in a systematic collection of data on particular planning approaches. For instance, there is no way of knowing how local governments use statutory instruments to address issues such as climate change, housing affordability, or water quality, unless we undertake a purposive issue based survey, or read each and every statutory plan. This is curious because in peer meetings of planners a very common question is "how does your plan deal with issue x"[1]. Planners are not surprisingly curious about how their colleagues are approaching the issue.

This knowledge gap is not unique to Australia. In the United States, where there are thousands of local planning units (cities, counties and municipalities), research on plan content has faltered because of methodological and technical difficulties of collecting accurate data on diverse planning approaches across multiple jurisdictions (Lewis and Neiman 2002). Case studies or plan content analyses using smaller samples have been undertaken by researchers to identify planning approaches to specific issues, but it is difficult to extrapolate to broader practice from this approach (eg. Berke and Conroy 2000, Norton 2008). Some broader surveys of professional local government planners have examined plan performance in relation to specific policy goals -active transport (Aytur et al. 2008, Librett et al. 2003), climate change (TCPA 2006), coastal development (ALGA 2005), and growth management (Lewis and Neiman 2000, Pendall et al. 2006). Recently new databases on planning regulation have been developed in the U.S, for the purpose of investigating relationships between planning controls, housing construction, and prices. For instance, the Massachusetts Local Housing Regulation Database now holds information on local zones and other land use regulations used by 187 authorities as at 2004 (Schuetz 2009), and the Wharton Survey of Land Use Regulation includes over 2000 municipalities (Gyourko et al. 2008). Further, the U.S. Department of Housing and Urban Development (HUD ¨s) has commenced work to develop a comprehensive national survey of local land use regulations as a basis for quantifying differential impacts on housing supply and price (Burchell & Lahr 2008).

Our intention was to establish a similarly comprehensive reservoir of data about local planning regulation in Australia, as a basis for further analysis of impacts, costs, and benefits and to allow tracking of plan change over time. We aimed for universal coverage of local planning control in Australia due to the difficulties associated with generalizing across a relatively small total population of local government units (there are around 600 local government units in Australia, although the total number is unstable due to regular amalgamation and boundary change).

[1] Observation of author Phibbs from attending an informal network of planners in Western Sydney convened by the Western Sydney Regional Organisation of Councils (WSROC). This network meets quarterly and is attended by about 25-30 planners.

Design of the AULUPP Survey and Monitor

Initially, the main challenge was to construct a valid data collection method able to capture

the various planning approaches employed across Australia. Following an analysis of literature on regulatory land use planning approaches thought to promote or affect goals relating to environmental sustainability, housing affordability and choice, and a review of the different approaches to plan writing across the Australian States and Territories, we designed a draft survey instrument. The survey includes questions about mechanisms for environmental sustainability – energy and water performance, sustainable urban form, climate change mitigation and adaptation, and biodiversity conservation; as well as provisions for housing diversity, accessibility, and affordability (Appendix One).

The instrument was reviewed by a reference group of professionals familiar with different Australian planning jurisdictions then piloted with a small sample of local government areas. The final AULUPP survey was designed for online administration, and is able to be completed either by professional planning respondents from each local jurisdiction or by researchers with planning qualifications. This also means that the survey is able to be completed by any suitably qualified persons able to access and interpret publically available local plans, including students, despite potential differences in local knowledge and plan interpretation. By doing the survey in class, students can actively contribute to the research project, although subsequent review by an instructor is needed to ensure the accuracy of responses. We also maintain separate data sets to protect the integrity of each collection protocol.

The questionnaire (which can be viewed at: http://ppm.arch.usyd.edu.au) uses a matrix design to compress and group planning techniques and policy areas. Completion of the survey is intended to be an interactive experience, and principles of internet survey design (including appearance, format and question order, restricted access to avoid multiple responses or responses from those beyond the target sample, and testing across different browsers) were employed (Burkey and Kuecher, 2003). Explanations of each question and possible response are available via pop up boxes. These functions are thought to make the online survey a more informative and engaging experience than completing a paper based questionnaire, allowing interactivity usually only available through face to face interview methods. We hoped that the novel online environment would also appeal to students.

AULUPP in the Classroom

A fully functioning shadow internet site and data base was created to enable students to participate in the survey by examining plans from different jurisdictions in class. In March 2008, we first embedded the exercise within the course „Planning Procedures ", which is a mandatory course for post graduate urban and regional planning students at the University of Sydney. The course itself aims to introduce students to statutory planning in Australia – in particular, to develop student literacy in plan interpretation and review. We embedded the exercise as a mandatory assessment item, but non graded – meaning the student must undertake the exercise but is not marked on performance. The reason for non grading is that the vast difference in planning instruments and content makes it difficult to compare student effort and achievement – some students find themselves assigned relatively clear and simple plans while others may receive lengthy and complex documents.

Students are allocated two plans, from different local government areas around Australia – typically, two plans that are vastly different in length and structure. Initially, providing student access to planning instruments for the survey proved difficult – because of the lack of ready access to planning instruments in some jurisdictions. This was a particular issue in relation to plans from Queensland and Tasmania, where local governments themselves have been responsible for providing electronic versions of their instruments to the general public. When we began doing the exercise in class, Victorian planning schemes were only available as a series of multiple pdf files and so students were required to access schemes from that State solely online. Many jurisdictions have a tradition of much lengthier planning instruments than the typical plan in NSW – which is between about 60-120 pages in length. Some jurisdictions in Queensland and Victoria have plans of over 600 pages.

When we began the exercise in early 2008 it was necessary to print hard copies of plans for review, however, since this time electronic access to planning instruments has become much more consistent and reliable. For this reason students are now able to undertake the survey in pairs in the computer laboratory using one PC screen for the online survey and the other for the planning instrument under review. Security measures maintain the integrity of student responses (for instance, logon and password access to each local government area plan response). The course instructor and a tutor are available during the exercise to assist with student queries, of which there are many. Indeed, much of the learning occurs through student questions about plan navigation and potential interpretations of approaches. After a short time, most students proceed fairly quickly through the survey and instrument, taking between 20 minutes and one hour to complete a survey against each plan.

AULUPP and the learning and teaching experience

In June 2009 we added an additional series of questions to the standard student evaluation questionnaire routinely completed for each unit of study. We were interested to understand how students perceived the workshop and its contribution to learning about plan interpretation and policy making. We also sought feedback on ways to improve the exercise. We sensed that students who had had no prior exposure to a statutory planning instrument – aside from the particular planning subject itself – might find the exercise more difficult than those more familiar with plans or with some exposure to professional planning practice. We also suspected that international students may find the exercise overly difficult – which could undermine their learning experience. We did not question students about their experience of research engagement in the belief that research involvement per se was a lower priority for students than the broader learning objectives associated with plan interpretation, perhaps reflecting the assumptions about professional learning goals noted by Griffiths (2004) as discussed above. However, our observation is that exposure to a large and ongoing research project occurring at their home institution was valued by many students and so subsequent student evaluations may include a question about the research encounter.

Unfortunately, on the day that the exercise took place, internal hosting difficulties meant that some aspects of the website were not operational, so most students had to complete a paper version of the instrument, while browsing the online version to view its pop up explanations. This undoubtedly compromised the quality of the experience for many – ease of use is an important principle of successful online survey administration and is similarly important for any e-learning experience.

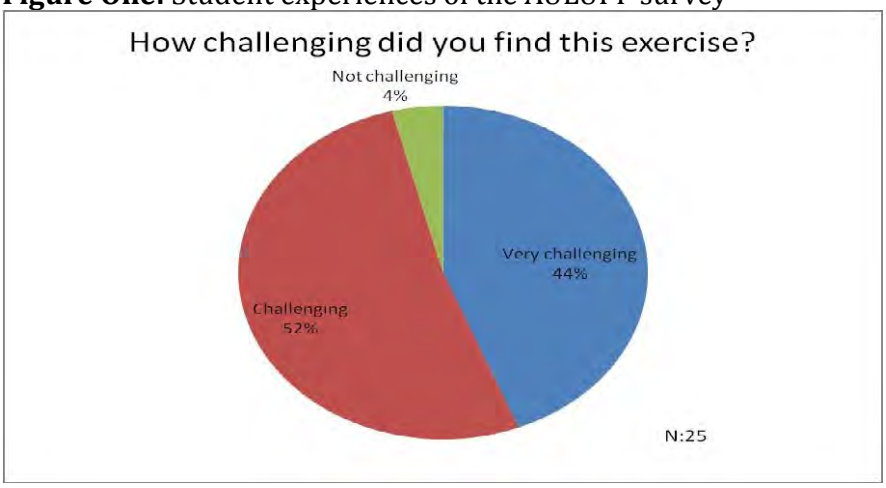
About the students

A total of 25 students took part in the survey and subsequent evaluation. Of these, 14 were local students and 11 were international, mostly from non English speaking backgrounds. A fifth of the class had some professional planning experience, either in Australia or overseas, but just over half (13 students) had read a planning instrument of some kind before undertaking the Planning Procedures class.

Learning outcomes

Overall, students found the exercise challenging, or very challenging, with only one student reporting that the exercise was not at all challenging for them to undertake (Figure 1). There was no significant difference between international and other students in the responses to this question.

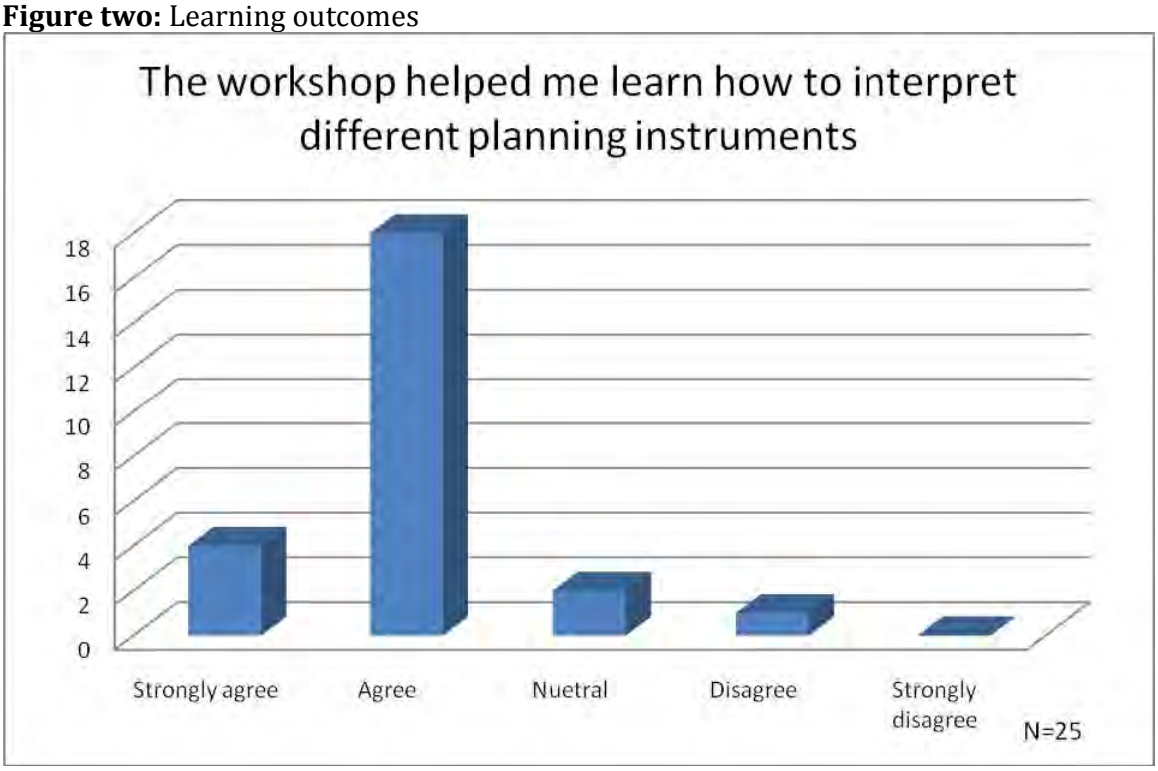
Figure One: Student experiences of the AULUPP survey



Source: Student evaluations, June 2009

Most students also reported that the exercise helped them learn how to interpret planning instruments (Figure two). Again, there was no significant difference between international and other students in the responses to this question.

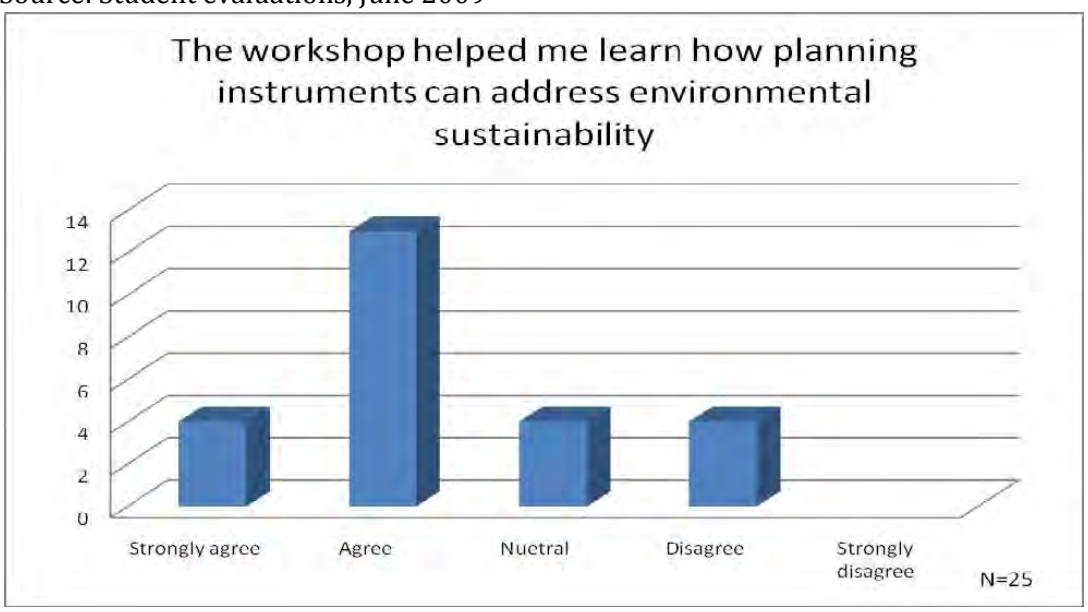
Figure two: Learning outcomes



Source: Student evaluations, June 2009

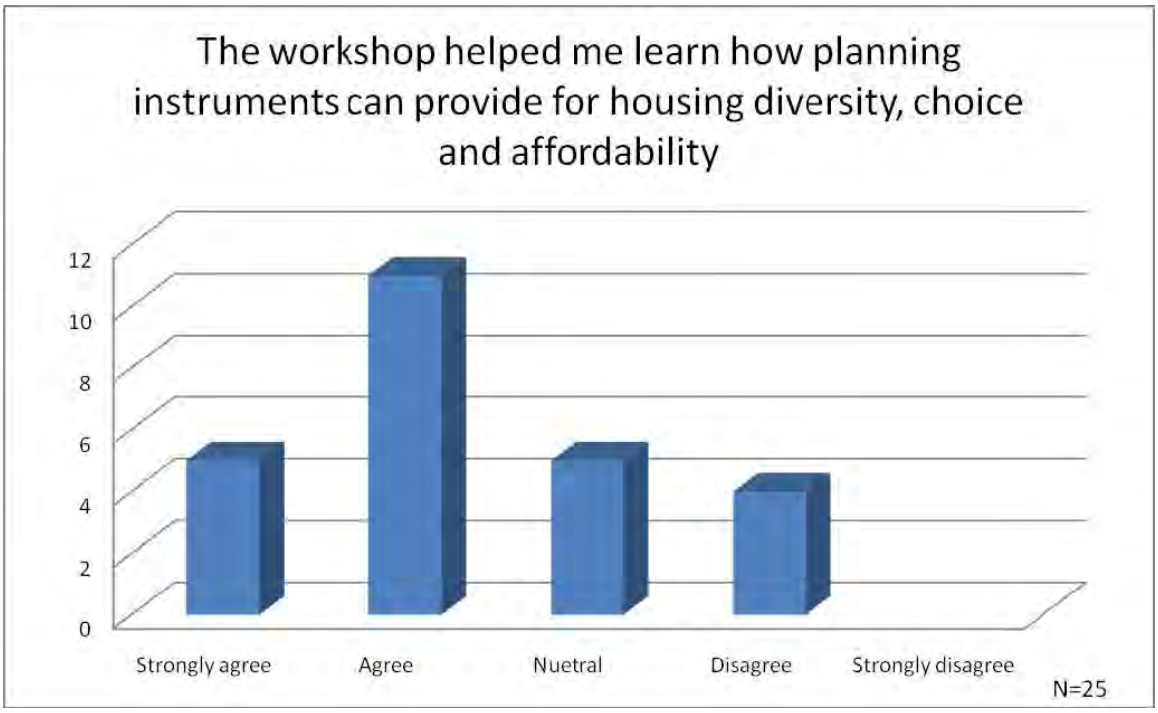
Many students also agreed that the AULUPP survey had helped them to learn about sustainability in statutory plan making (Figure three). Comments from students indicated that sustainability learning was greatest when plans reviewed included specific measures for environmental performance or conservation – although some found the act of searching for these elements within plans, using the survey instrument as the guide – to be instructive itself.

Figure three: Sustainability learning outcomes
Source: Student evaluations, June 2009



Similarly, while many indicated that the ALAUPP workshop had helped them learn how planning instruments can address housing affordability and choice, responses were affected by the extent to which plans reviewed contained such provisions (Figure four).

Figure four: Learning about plan provisions for housing diversity and affordability



Source: Student evaluations, June 2009

When asked to nominate the best thing about the exercise, many students emphasised the value in learning about different approaches to plan making across different Australian jurisdictions:

> *"I realised how other States' planning instruments can be vastly different" (Student response, June 2009).*

Despite the novel online environment, some students still found plan reading to be tedious and overwhelming. When asked to nominate the worst thing about the workshop, responses ranged from the length and complexity of the plans reviewed, to the tedium of having to review them at all (Table One). Some students were also frustrated by the complexity of the schemes examined, and by the lack of actual provisions relating to the policy goals like sustainability or housing affordability. The need to view planning schemes online was off putting for some students, although others used search functions to aid their navigation of the documents.

When asked for overall suggestions to improve the workshop, some students observed that their learning may have been enhanced if the instruments they reviewed contained more of the provisions they were looking for. This is in part a policy development issue
– better plans in the real world will lead to a more rewarding experience for student plan readers. Others suggested examining additional states to maximise opportunities to learn about plan interpretation (students only reviewed instruments from two Australian jurisdictions, Victoria and Queensland). Time with the class instructors was felt to be important. Some students expressed the view that the workshop expectations were too ambitious to achieve within a single two hour class given the amount of material to assess and interpret within each planning instrument. However, this view was not widely expressed, suggesting that student learning experiences were greatly affected by the complexity of the instruments they reviewed.

Table One: Best and worst thing about the AULUPP workshop

Best Thing	Worst Thing
Looking through the plans and finding something that corresponds Examining the differences between planning documents used in different States Undertaking a check on all controls and guidelines to see how they meet policy goals Comparing approaches to policies in different States	The amount of pages to review Looking through the plans Not finding anything Confusing planning schemes Though concerned about sustainability councils have few ways to achieve it The length of planning instruments and need to view online Difficulty of locating information within the planning schemes

Source: Student evaluations, June 2009

As a result of this student feedback we intend to modify the conduct of the workshop perhaps by purposively selecting plans for student review – choosing more accessible instruments that also contain a more comprehensive coverage of policy goals. We will also endeavour to make more tutorial assistance available during the workshop, although this is difficult when classes are large. Another option is to get students to review one purposively selected instrument before the workshop where there is an opportunity for group questions and feedback, and we have now incorporated this process into the first assessment item for the class.

Conclusion: Learning from AULUPP?

In terms of our own broader learnings as educators seeking to develop an effective research based pedagogy – we conclude that our current model represents a position of compromise in terms of both discovery based research and professional learning objectives. To maximise the research outcomes of our AULUPP workshop, we would focus on the accuracy, comprehensiveness, and authenticity of data collection, meaning that some students would be exposed to a very difficult, and possibly unrewarding process of plan review. To maximise learning outcomes, we might remove the active inquiry element altogether, and have students review a selection of well chosen and vetted plans, removing the risk of the unknown, associated with any genuine research activity. We have opted for a middle path, with student inquiry directly contributing to the findings of the larger study but embedded within a larger classroom context characterised by more directed and traditional forms of research informed instruction and combined with opportunities for critical reflection and analysis.

Wider lessons for Australian planning

In this paper we have not presented results of the AULUPP survey itself – indeed the analysis of AULUPP survey data is an ongoing research process, with other potential classroom applications. However, the results of this small student survey are instructive not only for our design of this classroom workshop but also as an indicator of the ways in which student planners engage with one of the primary mediums of their new trade – statutory land use plans. If new planners find engagement with planning schemes to be discouraging due to their complexity and uninspiring due to their failure to address important goals – what does this suggest about the state of statutory planning in Australia and its future? What chance does the general public have with engaging with the instruments? Planners often complain that the public only engage with planning at the development application stage and not when plans are being compiled. Perhaps the confusing nature of statutory plans is part of the problem. As Macris (2000) comments:

> *"A well written plan or other planning document can be a valuable resource forcitizens, decision-makers, government agencies, consultants and many other…….Then why are so many planning documents hard to read, understand and use?"* (Macris 2000, p.xiii)

As the current wave of State and Territorial planning system reform ultimately permeates through local planning schemes across Australia, future AULUPP surveys should register these changes. Will students (and the broader community) be any more engaged and excited by local planning schemes? We hope so.

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Urban Design as Social Benefit: Thinking Beyond Formality and Physicality

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Abstract

While the term 'urban design' is ubiquitous within the realms of planning, architecture, government, and commercial development, it remains a term without a universally-agreed referent, and, perhaps more contentiously, an enterprise *without an explicit commitment to societal betterment*. In respect of end products, urban design may manifest itself via both concrete and strategic outcomes, may be directed at both public and semi-public spaces, and may operate over a range of scales. In respect of specific determinants, urban design responses may be motivated and driven by formal and/or aesthetic issues, by economics, by statutory or regulatory requirements, by political ideologies, by the dictates and incentives of speculative development, or by a range of specific community requirements. Yet notwithstanding the reasonableness and inevitability of such differences, this paper postulates that *all* of the above should be construed within a wider social frame, and suggests that the outcomes of the urban design process should confer significant social benefit. And while it is usually taken as read that urban design *always* has both the intention and the potential to make positive contributions, it is nevertheless the case that, from a social perspective, the determination and fulfilment of specific and contingent outcomes inescapably suggests the likelihood of discrimination against, and thus *dis*benefit for, some, and the possibility of under-valuing, selectively deforming, or simply ignoring 'big picture' considerations pertaining to infrastructure and transportation, land use, sustainability, social cohesion and inclusivism, place identity, and so forth. Moreover, from a *design* perspective, the seduction of an over-riding commitment to *physicality*, to the architectonics of *form*, and thus to *aesthetic and methodological determinism*, is an ever-present issue worthy of closer consideration. It is this last feature of contemporary urban design that is explored in this paper.

Introduction

From the outset it should be made clear that this paper is a polemic. It seeks to raise a number of significant issues pertaining to the nature of urban design but does not attempt to examine such issues in an empirical manner nor to present them in detail in an academic manner. Rather, it explores the dual propositions (i) that urban design has both an ethical and a professional obligation to address itself to social needs, and (ii) that much contemporary practice overlooks or actively marginalizes provision for social needs in favour of a commitment to formal outcomes driven by increasingly esoteric design- and decision-making means. While the latter may – or may *not* – be self-evident within the professional world of pragmatic accomplishment, it is increasingly the case within the realm of academic theorisation. Drawing attention to and highlighting a number of questions in relation to these, and a range of closely intertwined, issues, even in such a brief manner, thus seeks to generate necessary debate about relations between social needs, formal outcomes, and the decision-making mechanisms that link – or increasingly separate – the two.

On the nature of urban design – some assumptions

As with many people trained in architecture – and, it might be speculated, with many people involved in cognate disciplines such as planning, as well as with many members of the general public – mention of the term 'urban design' immediately calls to mind notions of what might be called *the determination and/or the implementation of specific and physical objects within urban or quasi-urban environments*. In other words (and to be both more specific and more prosaic) our minds inevitably turn to the provision of new buildings; to the external spaces that such buildings both 'create' and are located in relation to; and to the interrelations with other and pre-existing buildings and infrastructure, including major transportation provisions, that

constitute the contexts of such interventions.

While urban design is thus understood to be the design of something *more* than individual buildings in themselves, it is nevertheless often taken to be about *designs for the arrangement and location of multiple buildings within a specific context*. And if it is understood that urban design may operate over a range of scales, from the determination of land subdivisions to the design of individual urban places; that it may be directed at both major public spaces and, via its links with housing provision, at quasi-private ones; and that urban design remains properly-so-called even if its outcomes exist at the level of strategic planning and intentionality rather than physical production and implementation; then it is also most usually the case that our thinking about – and thus our assumptions about – urban design is predominantly directed at the *formal*, i.e. literally at *the form of the physical infrastructure proposed and/or executed*.

Now this is not unexpected. Urban design *is* about the physical and thus the formal. But it does raise a number of generic issues that are worthy of consideration and questioning. In so short a paper only three can briefly be introduced:

- first, to what extent are the formal and aesthetic aspects of urban design construed to be *an end in themselves* – and why and by whom?
- second, and acknowledging the differences between individual urban design briefs, what are the overarching aims that *initiate and drive* urban design proposals, the aims that such proposals
- presumably *respond to and attempt to meet*, and thus that transcend the merely physical, such that the physical is itself the *vehicle for the accomplishment* of such aims? and
- third, how do design-related decisions affect not only the accomplishment of such aims but their very determination; and how and by whom are such aims formulated?

On the assumption of social betterment

Before trying to unpack these questions, however, it is important to consider why they might be worth asking, and to locate them not merely at a personal but at a community and *societal* level. And the answer relies on a particular proposition.

If it may be asserted that, despite its ubiquity within the realms of planning, architecture, government and policy-making, and commercial development, the term 'urban design' lacks a transparent and a universally-agreed referent, such that we all might know immediately and unequivocally what urban design 'is'; and if it may also be asserted that this absence is hardly surprising given that the term covers such a wide variety of activities across these different realms; then it is *more* significant to propose that it is also a term that lacks *an explicit commitment to social betterment*.

Now this, of course, may be regarded as being both potentially controversial and self-evidently counter-intuitive. Why? Because it is usually simply taken for granted that urban design *does* provide social betterment, *and cannot fail to do so*, on the dual basis that its proposals provide that which was previously absent (by the addition of the new and/or by the removal and/or remediation of the extant) and that such interventions *inevitably constitute improvements to the pre-existing situation*.

In any given example it might well be argued – indeed demonstrated – that this is the case. Yet this begs the question of what were the *aims* of the particular proposal upon which this affirmation of success is based, and, more importantly, the closely-intertwined albeit frequently ignored questions of how and by whom these aims were determined?; whose

betterment they represent?; which parties were ignored in or excluded from such decision- or brief-making?; and thus how and in what ways certain segments of society may be disbenefitted by the proposals enacted?

This is not to suggest that urban design should aim to, or can, please all of the people all of the time, but it does point to a range of significant observations, including:

- that decision-making is a complex matter involving multiple inputs and potentially conflicting aims and interests;
- that a commitment to inclusivity nevertheless inevitably suggests exclusion of some;
- that in offering urban design proposals intentionality – even demonstrably *good* intention – is not enough in the absence of wide-ranging and dispassionate analysis; and
- that while such proposals may well be manifest most clearly and directly via physical offerings in the form of buildings and infrastructure, urban design is, by its very nature and by its differentiation from both architecture and social commentary, also pre-eminently about the nature, condition and consequences of the urban fabric, and is not separable from social issues pertaining to the users of such.

To these we can add, of course, that, in some cases, inclusivity is not an aim; that in some particular instances power interests take precedence over other (and potentially more relevant?) needs of society; and that urban design is often perceived as being pre-eminently a matter of formal decision-making without due consideration of non-physical consequences. This is not to suggest a wilful disregard of consequences, but rather a touchingly naïve belief that good consequences automatically follow from good design decisions.

While specific urban design responses may be driven by formal and/or aesthetic issues, as well as by an ongoing diversity of academic theorisation offering radical reconceptualisations of what urban design should be, it is important to realize that, to greater or lesser extent, they are equally well driven by political ideologies, by power relations, by statutory or regulatory requirements, by economics, by the dictates and incentives of speculative development, and by a plethora of social requirements, whether assumed, mandated or predicted. Notwithstanding the presence of the latter, and the tacit assumptions

(i) that this is a matter for social planners, not urban designers, and

(ii) (ii) that meeting defined social requirements is synonymous with providing social amenity, it is nevertheless suggested that *all* of the above must be construed within a social frame, and that the outcomes of the urban design process and of design decision-making should offer – and should be demonstrated to provide – significant social benefit beyond the provision of a supposedly 'good environment' and/or 'a meeting of physical needs as specified'.

In thrall to the physical?

To what extent, then, might it be suggested that the formal and aesthetic aspects of urban design constitute an end in themselves? Or, perhaps to put it less confrontationally, to what extent are the *outcomes* of urban design *essentially and inescapably physical*, regardless of whether they are:

- *abstract-documentary*, in the sense of comprising strategic planning and/or policies of

intention;

- *concrete-formal*, in that they offer architectonic proposals (and/or infrastructural-transportation proposals, which cannot be dealt with here) for actual production and implementation within the urban environment;
- or what might be dubbed *intellectual-critical* in the manner of many essentially esoteric and algorithmically-driven schematics emanating from universities and aimed, supposedly, at 'thinking differently' about and subjecting to critical scrutiny contemporary urban practices?

The obvious answer to this question is, of course, 'to a high degree', i.e. it is in the very nature of urban design, as it is in the nature of many other of the design disciplines, to address the physical. This is its prime intention; this is its focus of engagement; this is, we trust, its area of expertise; and it is through proposals suggestive of physical responses or solutions to issues or problems identified as both emanating from and actively associated with, not merely the *urban*, but more precisely the urban *fabric*, that urban design – as opposed, say, to either individual buildings on the one hand or to social planning on the other – makes its principal contribution.

However, three specific and deeply interwoven contentions are offered here:

- first, that the above notwithstanding, urban design proposals are frequently *too much* about the physical, even when they are not couched in terms of specific ready-to-make construction schemes but rather in the form of general strategic principles;
- second, that simultaneously both the cause and the effect of this overly-narrow concentration on the physical is that urban design schemes too often seriously *neglect key social issues* in terms of their briefing inputs, their actual design proposals, the aims and intentions of such proposals, and their predicted and/or demonstrated social consequences; and
- third, that this emphasis on the physical, and thus essentially on the *architectonics* of urban design, can all too easily lead to a focus on *the individual or iconic building* as central to such proposals, at the expense of a more profound analysis and understanding of the specific urban fabric and its particular social and environmental issues, as if producing the former indubitably 'solves' the latter.

The other thing that can be said about all three categories, of course, is that they are all inescapably *political*. And while much has been written about this – from Mayo's proposal of 'Political Avoidance in Architecture' (1985), through McGlynn and Murrain's discussion on the politics of urban design (1994) and Gandelsonas' views on 'The Master Plan as a Political Site' (1995), and thus to much recent literature – this political dimension nonetheless remains either somewhat 'tangential' to designers' thinking (how on earth *is* space political? (Lefebvre 1976; Jameson 1997)) or is simply taken literally (what do council or government require?). Despite its importance, however, this aspect of urban design thinking cannot be explored here, and we must return to the centrality of the physical.

Formalism and the aesthetics of urban design, or benefit, follows form?

Before committing ourselves unreservedly to the physical, however, it is first necessary to indicate, if perhaps to set aside here, the views of those who would, for sound reasons given their particular focus, locate urban design within a different framework of thinking. Thus, while acknowledging that "the task of designing urban places – where the designer is primarily

concerned with the sensual, but particularly visual, qualities of these places – has traditionally been termed *urban design*", Varkki George, for example, is at pains to establish "that urban design is a *second-order design endeavour*" (1997, p.143). By this he means that "designers are only indirectly responsible for producing built forms and the spaces in between them; they design the decision environment within which others make decisions to add to or alter the built environment" (1997, p.143).

Now, this is not without substance at the level of strategic planning – at the level of Gandelsonas' claim that "the master plan's role is to *fill a void*, to mask the absence of architecture" (1995, p.20) – which does indeed constitute a significant sector of the urban design field. Yet at the same time it is quite clear that for many urban designers or, at least, for many practitioners who execute urban design proposals, and for the institutions or professional bodies that recognise and reward such proposals, the overtly physical – the actuality of the design that has been or will be brought into existence – is of paramount importance. And to the extent that urban design is thus, to large degree, *inevitably* physical in respect of its proposals, then it is likewise inevitably connected to the formal, and thus to the aesthetics of architectonic form.

While we cannot deal here with the various ways in which aesthetics has been dealt with in the urban design literature over the last thirty years, from the historical (Rubin 1979) to the more prospective (Taylor 2008), three issues triggered by the phrase "the aesthetics of architectonic form" are worthy of brief mention here.

The first of these relates to the contention, noted above, that, for many practitioners, urban design is inescapably physical in respect of its proposals, and thus inescapably linked to the formal and to the aesthetic. This suggests two questions:

- to what extent is this engagement with and commitment to aesthetics and formal development perceived as being a (or the) primary aim or intention or purpose of urban design?; and,
- if it *is*, what role in the generation of urban design propsals is played by other potential briefing requirements, and by other criteria of successful outcomes, associated with *social benefit divorced from either visual stimulation or the mere provision of functional needs*?

Aseem Inam's provocative criticism of urban design, viz, that "it is superficial because it is obsessed with impressions and aesthetics of physical form; and it is practised as an extension of architecture, which often implies an exaggerated emphasis on end product" (2002, p.35), supports this view. In similar manner a brief survey of the jury citations for the (Royal) Australian Institute of Architects *Walter Burley Griffin Award for Urban Design* over the last decade ([Jury citation] 1998-2008) goes some way to reinforcing it, suggesting a (perhaps not surprising) fascination with the formal qualities of the objects designed and their provision of functional excellence for a particular purpose rather than with any deeper analysis of the benefits bestowed on the community by their execution.

Given, then, that urban design is 'naturally' associated with changes to the physical environment, and thus inevitably results in physical responses to specified requirements, the second issue relates to the question of what generalized ideologies – aesthetic, formal, theoretical, social, political, and so on – might inform, drive, and effectively circumscribe, specific responses? While this cannot be explored here it is worth drawing attention to

Kelbaugh's discussions of the 'three urbanisms' (2005; 2007; 2008), Eisenman's quasi equivalents (quoted in Baird 2005), and Fraker's six "current modes of urban design thinking" (2007, p.61). Of these it is Kelbaugh's taxonomy of *New* Urbanism (Fishman 2005; c.f. also Bressi 2002; Haas 2008), *Everyday* Urbanism (Mehrotra, 2005) and *Post*-Urbanism (Strickland 2005; c.f. also Moor & Rowland 2006) that has now become a standard for discussing urban design, at least from a U.S. perspective. And while it is worth noting Eisenman's quasi-parallel terminology of the Arcadian, the Utopian, and Koolhausian "junk space" – "Junk space is not a project because it isn't critical, it's cynical…" (Eisenman, in Baird 2005, p.3) – and acknowledging Fraker's supplementation of new and everyday urbanism with the additional categories of generic urbanism and hyper-modernity, hybrid urbanism, transformative urban morphology, and urban ecological reconstruction (2007, pp.6263), it is only Kelbaugh's 'big three' that can be summarised briefly here.

Describing New Urbanism as being "both idealistic and pragmatic" Kelbaugh notes that "It represents a peculiarly American mix of noble objectives and commercial means, high-striving and lofty in its communitarian objectives but practical in its methods" (2008, p.42). A longer description recognises several issues or incentives that, while being manifest *through* physical results, go beyond the merely physical in their *aspirations*:

> …to equitably mix people of different income, ethnicity, race, and age; to build public architecture and public space that make citizens feel they are part of, and proud of, a culture and community that adds up to more than the sum of its private worlds; to be a responsible ecological force; to weave a tighter urban fabric that mixes land of different uses and buildings of different architectural types within a well-connected network of streets and green spaces; to utilize regional public transit, revenue sharing, planning, and governance to better tie together the metropolitan area (Kelbaugh 2008, p.42).

While he acknowledges that the above aims are "more than its proponents have been able to achieve on the ground" he points out that in its aims and its thinking "… it attempts to better integrate physical and social environments. It maintains that there is a structural relationship between special behaviour and physical form… [and] It posits that good design can have a measurably positive effect on one's sense of place and community" (Kelbaugh 2008, p.42).

In contrast, Everyday Urbanism is characterised as being "not as utopian as New Urbanism, nor is it as tidy and doctrinaire" (2008, p.42). As Kelbaugh opines, it "celebrates and builds on the richness and vitality of daily life and ordinary reality. It has little pretence about the perfectibiity of the built environment. Nor is it about utopian form. But it is realistic about social equity and citizen participation, especially for disadvantaged populations. It is grass roots and populist" (2005, p.8). This, he suggests, makes Everyday Urbanism "more conversational and bottom-up than inspirational and top-down" (2008, p.42). Interestingly, given the earlier presumption of urban design proposals emanating from urban design *professionals*, Kelbaugh adds that Everyday Urbanism "admires and tries to help people adapt and improvise *in spite of* available physical design and planning" (2008, p.42), and that it "tends to work…to empower disadvantaged and disenfranchised people and communities by working in the gaps and on the margins" (2008, pp.42-43).

As yet further contrast Kelbaugh perceives the vaguely named Post-Urbanism as being "heterotopian, provocative, and sensational" (2008, p.43). "Difficult to characterize physically," he says, it favours disconnected, broken, fractal, or flowing forms. It often accepts an

automobile and consumer-based urbanism. It argues that shared values or meta-narratives are no longer possible in a world that is increasingly fragmented and composed of ghettoes of the "other" (e.g., the homeless, the poor, minorities) and mainstream zones of consumers, internet surfers, and free-range tourists. These liminal and exciting zones of taboo and fantasy, and these commercial zones of unfettered consumption, are viewed as liberating… (Kelbaugh 2008, p.43).

Calling to mind much recent 'speculative' and 'process-driven' urban design proposed within many university architecture schools, Kelbaugh's suggestions are that Post-Urbanism "attempts to impress an increasingly sophisticated consumer of the built environment with ever-wilder and more provocative architecture and urbanism" (2008, p.43). Perhaps more significant from our current perspective are his views that "its architectural language is usually abstract, with little reference to surrounding physical or historical context" and that both its intentions and its outcomes are centred around shock tactics, "no matter how modest the building or program" (2008, p.43). In many cases it is difficult to know, he suggests, "whether it employs shock for its own sake or whether the principal motive is to inspire genuine belief in the possibility of changing the status quo and resisting conventions and limits that are thought to be too predictable and restrictive" (Kelbaugh 2008, p.43).

Now this last description neatly introduces the third of the key issues alluded to earlier in respect of aesthetics, architectonic form, and the seduction of formalism, viz: *what of the future*? While any response here must necessarily be skeletal, three interconnected questions might serve to sketch our concerns:

- first, to what extent has the contemporary fascination with the urban become so elided with architecture that the production of the individual iconic building – Gehry's *Guggenheim Museum* in Bilbao, for example – is now *synonymous with urban design*? And if so, what of the provision of social and community needs that *exceed or lie outside* both sculptural formality and economic regeneration?
- second, if, as Moor suggests, "Experience tells us that every new generation of designers rejects the views of the previous generation and seeks to make their own mark on the built environment" (2006, p.13), where will this lead urban design over the next thirty years, and, more importantly, *on what intellectual, theoretical, ideological and/or formalist basis*?
- and thus, third, what is the – often conjoined – role of education and of criticality in thinking about both the future of urban design and, again perhaps more importantly, *future urban conditions*?

On the basis that it ought simply to be taken for granted that tertiary education necessarily and deliberately exceeds training and provides its graduates with high levels of analytic and critcal skills in respect both of 'their' disciplines and professions, it is perhaps pertinent to ask *what form(s) does this criticality take, where does it lead, and what is its benefit*? Now, it is somethung of a truism at the moment that, if urban design is currently fascinated with architecture, then architecture is no less fascinated with urban design. At the same time it is reasonable to assume that any such critical engagement is, quite properly, carried out under the aegis of 'thinking differently' or 'thinking anew', thus offering a potentially valuable critical perspective on current urban practices. Yet there is nevertheless a seductive tendency for urban design work produced within architecture studios to mistake *thinking* anew for *generating* the new, and thus to lapse into a kind of esoteric and quasi-futuristic engagement wth the urban, quite divorced from the real world and from any idea of social benefit beyond

the intention to produce visually and aesthetically stimulating formal – and often essentially formal*ist* – outcomes based on digital repetition, generative algorithms, abstract procedural methodologies, patterning, diagramming, and a variety of other aleatory techniques.

And while it is obvious that the above is not always the case, it is perhaps instructive to introduce here a number of key themes, both positive and negative, that bear on the urban, the contemplation of which might well assist in avoiding both the seduction of formalism and the temptation of the 'merely physical', without negating the intellectual-critical possibilities inherent in radical studio proposals. Appropriate consideration of such issues – and appropriate consideration of such issues in respect of their social consequences rather than the mere enumerating of their overtly physical contributions – should inform urban design proposals such that, while inescapably formal and physical, responses to and attempts to meet such requirements render the physical the *vehicle for the accomplishment* of such aims.

Benefit follows consideration: An antidote to formalism?

Given the nature of this presentation it is possible here only to enumerate briefly a range of issues pertinent to these concerns. From a relatively small-scale and location-specific perspective might be noted continuing speculation over the *loss of public space* (c.f., for example, Avermaete & Teerds 2007) and the *deterioration of streets* (Macdonald 2007). In parallel with this are issues pertaining to urban design's role in establishing *safety in general*, as well as more specialized concerns such as those addressing child-friendly cities (Bridgman 2002) and, more recently, positive (and negative) relations between *urban design and health* (Handy 2002; Jackson 2003).

At both a larger-scale and a less 'physical only' level lie the issues of the loss of, and the critical significance of, *place identity* (Gospodini 2004), and the role of sensitive urban design in *cultural regeneration*: "restoring and improving the quality of urban life through the enhancement and development of the unique characteristics of a place and its people" (Wansborough & Mageean 2000, p.181). Congruent with this, and dynamically interrelated with it, is the major issue of the urban as an established or a potential site of *tourism* (Gospodini 2001), and thus urban design as a contributor to the *economic development of cities* (Gospodini 2002; Madanipour 2006). In respect of this, of course, the iconic building, and thus the architecture-urban design elision, has played – and continues to play – a major role. As Hubbard notes, "the construction of spectacular urban landscapes has become a requisite strategy for making the city attractive as a site for investment" (1996, p.1441).

In terms of housing the community the ongoing need for large-scale *public housing* looms as both a potentially negative urban design issue and an opportunity in its own right (Fishman 2004), while the ubiquitous issue of private housing, home ownership, and the *ever-expanding suburban network* continues to generate debate, criticism, frustration and lifestyle changes (see Garde 2008; Harfield & Prior 2008). The negative connotations of suburban sprawl, and of the strip or edge city, are often unfavourably compared with "the virtues of the compact city", the model being, as Montgomery suggests, "the traditional European city which is relatively dense and fine-grained" (1998, p.93). Paralleling this is the idea of "Smart Growth" – "a movement…advocating a set of land use and design strategies…intended to direct new development toward existing urbanized areas and away from agricultural and natural landscapes" (Kiefer 2004, p.1) – while the overarching issue of *sustainability* in all its forms should inform all of the above.

Finally it is worth noting ongoing debates concerning

- the necessity and/or possibility of *controlling urban design* (c.f. for example, Carmona 1996a; 1996b; Graus 1997) and thus the idea of *design review mechanisms* (Punter 2007);
- significant and often overlooked questions concerning stakeholders, public input and *community consultation*;
- and the possibility of – and thus the potentially persuasive power of – the *'design manifesto'*, a random selection of examples of which might include Jacobs and Appleyard's "Toward an urban design manifesto" from 1987; Rowley's "Definitions of urban design" (1994); *The Charter of the New Urbanism*, presented at the Congress for New Urbanism in 1996 and Urban Design Associates *The Urban Design Handbook* from 2003; Krieger's "Territories of urban design" and Lloyd-Jones' "Globalising urban design", both from 2006; and Brown, Dixon and Gillham's recent book *Urban design for an urban century: Placemaking for people* (2009).

Conclusion: Never-ending questions

Again given the briefness of the current presentation, my conclusion here can only take the form of reiterating a set of what should be – though are often not – well-established and open-ended questions that inform our ongoing thinking about urban design.

As a starting point we should constantly ask 'what *is* urban design?', meaning not just what is the nature of or field of engagement of urban design, but rather what is the *purpose* of urban design?, what is it *intended to do*? And since, it seems reasonable to assume, it pertains to *environments prepared for use by society*, then it follows that it should consider, in both its design generation and in its implementation, how and in what ways the community in general, as well as particular interest groups, is *improved* or *better served* by urban design proposals.

Moving then to the postulation that urban design is 'naturally' associated with changes, whether actual or policy-strategic, to the *physical* environment, it is also reasonable to assume – or perhaps to demand – that all decision-making conditioning urban design proposals should be predicated on an understanding of what the *consequences* of such changes will be for society. But again we should immediately note that understanding supposed improvement or 'success' here should *not* be limited to assessing the physical outcome against *the determining requirements and/or desires that 'briefed' that physical outcome*, but must include monitoring how and in what ways this physical outcome contributes to and/or provides social benefit *beyond the mere meeting of functional requirements and the promulgation of interesting, indeed, potentially inspiring, formal propositions*.

Urban design, it must always be remembered, acts on the social fabric of the community as much as it acts on the material fabric, though with perhaps a lesser degree of visibility. Hence it might be proposed that urban design is not limited to meeting the requirements of some 'specific problem', whatever this may be construed as, but should involve

- establishing and articulating *what the 'wider' problems or issues are*;
- determining how the perceived problem or intention *fits into the bigger picture of either social need or social consequence*;
- demonstrating *how and in what ways such consequences offer social benefit* not just to the 'proposers' (developers, councils, etc) and the immediate 'users', but to the community in general; and
- • indicating *how potential disbenefits are offset*.

Such issues in turn require considerable discussion. What, we might ask, *constitutes* social

benefit and for whom? Who is empowered to make urban design decisions and on what basis? How is the role of the expert balanced against the desire and/or need for community consultation? How do we criticize and evaluate urban design proposals and who is empowered to so evaluate? And what price profit? While it is not possible to answer these questions here, let me close with one final set of questions that are central to urban design: what is the role of theory, philosophy, ideology – and thus assumption – in urban design thinking and practice? To what extent is urban design *doctrinaire* according to its adherents and their contingent attitudes and beliefs? And thus how and on what basis is urban design *actually* determined? Only on the basis of serious, albeit very differently-informed, consideration of such issues can urban design assume its key role as the provider of social benefit rather than the mere delineator of formalist aesthetic values.

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Continuing On Past Yes: Is Collaboration Adequate for Implementation?

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Abstract:
The changing approaches to the planning and management of the metropolitan region centred on the State capital of Brisbane since the 1990s reflect three different planning paradigms built around collaboration, the centralised exercise of power, and hierarchy. The changes have occurred as the needs of the plan production and implementation processes have altered over time (Minnery 2009). Understanding these changes is facilitated through the use of a collaborative governance framework (Ansell and Gash 2008).

When it started in 1990 as the SEQ2001 project the regional planning approach was deliberately collaborative and inclusive (Abbott 2001; Margerum 2002). The negotiated result was an agreed but purely advisory framework for growth management, which supposedly provided guidance for local governments, the private sector and State government agencies, but was in fact often ignored. Collaboration was adequate for plan production but, as is often the case, was not enough for implementation (Ansell and Gash, 2008; Wier, Rongerude and Ansell, 2009). Collaboration and agreement were replaced by the exercise of statutory power and then to the exercise of hierarchical power under pressure from stakeholders seeking some certainty over future developments and as regional planning spread to the rest of Queensland.

The changes in planning paradigms – from collaboration to the exercise of power to hierarchy – provide lessons about collaborative planning and its implementation that may be applicable to metropolitan planning outside South East Queensland as well as providing an avenue to assess the efficacy of collaborative planning itself.

Introduction

Metropolitan regional planning's history has had many ups and downs over the last two centuries' (Bromley 2001, 233). This scale of planning exhibits a number of complexities, including the facts that institutional structures for planning at this level are often absent or underdeveloped; that there is a plethora of powerful and competing interests involved; that the mechanisms for identifying regional community views are often poorly developed; and that plan implementation usually involves actions by either higher or lower levels of governance than that of the metropolitan region itself. This paper reviews the consequences of this complexity through a case study of South East Queensland, Australia.

The lens through which this investigation is undertaken is that of collaborative planning. The main reason for this is that the South East Queensland regional planning project was initiated under the rhetoric of collaboration (Abbott 2001). But two other conceptual issues are also brought to bear. One is that the literature on collaborative planning normally concentrates on the process of reaching a consensus-oriented decision and the immediate outputs of the collaborative process. A few (e.g. Margerum 1999; Koontz 2005, 459) ask 'what happens after the plan?' Margerum (1999) for example, identifies four models of collaborative planning, each of which has an implementation stage (Susskind and Cruikshank, 1987; Gray 1989; Julian 1994; Selin and Chavez 1995), but in each of the models the implementation is very short-term. Margerum's paper (1999, 181) identifies the problems of 'getting past yes'. This paper extends

that question to longer term implementation, in terms of 'continuing on past yes'. The experience in South East Queensland shows that this is a far from trivial question and in fact deserves far more attention than it currently receives.

The rest of this introduction introduces the conceptual framework for the paper; this is then followed by three sections that explain the three stages in the development of regional planning in the case study; and the final sections draw lessons for the future of both metropolitan regional planning and collaborative urban governance.

The paper uses the meta-review of collaborative governance developed by Ansell and Gash (2007) as its starting point. For the range of reasons already identified, metropolitan regional planning can be seen as controversial and conflict-ridden but requiring participation by a wide range of interests (Margerum 2002). In fuzzy policy environments like this there are often calls for forms of collaborative governance (Abbott 2001; Innes and Booher 1999) or collaboration becomes a planning style that may exist in parallel to (or possibly in conflict with) other styles (Innes and Gruber 2005). Ansell and Gash (2007) note in their meta-analysis that collaborative governance is seen as something that has 'bubbled up from many local experiments, often in response to previous governance failures' (p. 544). They identify collaborative planning as a *species* of the *genus* collaborative governance, so their overall framework is used to structure this discussion. Their analysis includes both planning and metropolitan governance.

Collaboration occupies a central position in current approaches to planning. Judith Innes (1995) saw it as the emerging paradigm of planning in the 1990s, and Healey's (1997) book suggests it as a strategy for 'shaping places in a fragmented society'. Collaboration is a desirable form of human interaction. When connected to the idea of 'governance', however, some serious difficulties arise. These include questions about the distribution and sharing of power, and questions that are important in public policy making, such as where the eventual accountability for collaborative decisions might lie, who is accountable when things go wrong, and most importantly who is responsible for on-going implementation, especially when the collaborative decision-making process operates in parallel to an on-going administrative system . In collaborative governance as in urban governance there is also the question of the roles of the state and non-state actors (Minnery 2007, Bell and Hindmoor 2009). Ansell and Gash's definition of 'collaborative governance' seeks to address these difficulties. They define it as:

> A governing arrangement where one or more public agencies directly engage non-state takeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets (2007, p. 544).

'Governance' is now widely accepted as a term that describes public policy development and implementation that incorporates roles for government, the private sector and the community sector (Minnery 2007). Ansell and Gash (2007, 545) clarify that whilst there are roles for the participation of both public and private stakeholders in the establishment of laws and rules for the provision of public goods, collaborative governance is something where although public agencies are 'the initiators or instigators of collaborative governance', it still 'requires participation by non-state stakeholders' (p. 545). But the state is still the initiator or instigator. Like more recent writers in public policy, such as Bell and Hindmoor (2009) they see the state as still a central and powerful player in governance.
For the collaborative arrangements in South East Queensland a more nuanced conceptualisation of 'the state' is needed, however. Most public policy analyses recognise the non-unitary nature

of the state, but this becomes particularly significant in a federal system such as Australia's. In Queensland as in the South East of the State, the Queensland government and the various local governments cannot be considered just elements of the one unitary, solidified state. Although legally local governments are creations of the State there are two sets of objectives, mechanisms and responsibilities involved. Here, as elsewhere, local government may both conflict with and collaborate with State governments.

The collaborative governance approach taken in South East Queensland with the initiation of its major effort at regional metropolitan planning in 1990 fitted within the Ansell and Gash (2007) framework with the important refinement that the state players were not unified. In fact the collaborative arrangements were mainly between the State government of Queensland and the local authorities in the region, although the central decision-making body set up for the regional planning exercise also included non-state stakeholders.

Stage 1: Collaboration and power sharing

Planning for the region encompassing the Queensland capital, Brisbane, has a very chequered history. There were some efforts at regional metropolitan planning associated with national government interventions in the 1940s, but nothing very much resulted from this (Commonwealth Housing Commission 1944; Harris 1978; Macdonald Holmes 1948). Another effort followed in the 1970s where a metropolitan regional plan (the *Moreton Region Growth Strategy*) was produced by a combination of national and State government experts as a technical project with minimal local government or community contribution (Co-ordinator General and Cities Commission 1976). The resultant plan was shelved soon after it was produced and never implemented. It had an important but negative legacy. The lack of involvement of local government created a distrust of State government regional planning in the minds of local government officials (Abbott 1995; 2001; Low Choy and Minnery 1994). As Ansell and Gash (2007) note, the prehistory of the relationships amongst stakeholders can influence how and under what arrangements collaborative governance occurs.

At much the same time as this regional plan for the South East was being produced in the 1970s another regional planning initiative was underway, driven by the Australian government. A covert but obvious purpose of this exercise was to reduce the powers of the State governments (Carey 1978). In other States of Australia regional authorities were created based on local government participation but in Queensland they were constructed by the State government as Regional Coordination Councils, chaired by representatives of the Queensland Co-ordinator General's office. The Regional Coordination Councils were remarkably short-lived. They were set up in 1972 but abandoned in 1977 (Harris 1977). However, an unexpected outcome of this brief flowering of regional coordination was that in the Moreton region (as South East Queensland was then called) the constituent local governments recognised the advantages of cooperation; they continued to meet as the Moreton Region Organisation to discuss broader issues that affected the region (Abbott 1995).

These two factors – the negative legacy of the *Moreton Region Growth Strategy* and the cooperation represented in the Moreton Region Organisation – resurfaced in 1990 when growing concerns about the impacts of the rapid population increase in the region led to the State government and local governments collaborating in a regional planning exercise called SEQ2001. The story of this initiative is well described elsewhere (Abbott 1995, 2001; Low Choy and Minnery 1994; Minnery 2001). The essential element for this paper is that SEQ2001 was initiated by the State government but was deliberately set up as a collaborative project between State and local governments and the wider community. The State did not create a new

metropolitan planning authority (or use an existing State government agency) to develop a regional plan. In order to gain this collaboration an advisory rather than a statutory output was to be created as this would not interfere with existing decision-making powers of either State or local governments. The Moreton Region Organisation reformed itself as the South East Queensland Regional Organisation of Councils (SEQROC) to provide a united contribution to the SEQ2001 process. This structure perhaps mirrored the creation of ROCs elsewhere in Australia, such as in NSW.

The SEQ2001 project produced, in 1994, a draft *Regional Framework for Growth Management* that was endorsed in 1995 by all three tiers of government (RPAG 1994; RCC 1995a). A more detailed Memorandum of Understanding was also signed between the State government and 17 of the 18 local governments in the region (RCC 1995b). In what can now be seen as a portent for the future, the Regional Planning Advisory Group, which had strong representation from the business, professional and wider community, was disbanded and a new Regional Coordination Committee (RCC), made up of State and local government representatives only, assumed leadership of the region's planning. The justification for this was that the more widely representative RPAG was appropriate for the collaborative development of the regional framework, but that it would be State and local governments' responsibility to implement the framework and so they should be given the principal oversight once the framework plan was created (RCC 1995a). The collaborative partnership that created the RFGM was clearly seen by two of the most powerful participants as being marginal to its implementation.

The RFGM was reviewed in 1996, following a change to coalition control of the State government. This resulted in it being re-endorsed but with an economic development component introduced for the first time (RCC 1996). In 2000, with the end of the SEQ2001 time period in sight, a refreshed but still collaborative and advisory process involving both state and non-state participants was set in place to produce a modified regional framework for the year 2021. Because the regional planning approach used in the capital city metropolitan region had been judged a success similar regional planning mechanisms had been set up in other parts of Queensland where there were pressures arising from population increase.

Several aspects of Ansell and Gash's (2007) collaborative governance framework can be seen in the early part of this process. Their framework definition criteria are that: '(1) The forum is initiated by public agencies or institutions, (2) participants in the forum include nonstate actors, (3) participants engage directly in decision making and are not merely "consulted" by public agencies, (4) the forum is formally organized and meets collectively, (5) the forum aims to make decisions by consensus (even if consensus is not achieved in practice), and (6) the focus of collaboration is on public policy or public management' (pp.544-5). All six of these criteria were fundamental to the SEQ regional framework process. The process was initiated by the Queensland government in cooperation with the region's local governments, both components of the wider 'state'. But the steering group for the project (the Regional Planning Advisory Group, RPAG) also had representation from the business, union, professional and community sectors. The RPAG was formally constituted, it aimed to work through consensus, and its goal was the development of a regional planning framework to drive public policy.

Ansell and Gash (2007, 551ff) derive a series of ten conclusions from their meta-analysis of numerous collaborative governance analyses. The first three (pp. 551ff) relate to power inbalances and incentives for collaboration. In SEQ the starting conditions involved a manifest power and resource imbalance (as the Queensland State government had the legal power to create by itself a metropolitan planning authority or to give that power to an existing agency if it

wanted to) but there were also clear incentives to participate (driven by growing community concern for the impacts on the region of its continuing rapid population increase). Ansell and Gash (2007) also show that special efforts are required where there is a history of antagonism. In SEQ the history was of distrust rather than of antagonism. There was an unusual form of facilitative leadership in the person of the relevant State government Minister (Hon. Tom Burns) who was keen to initiate a form of regional planning but who also saw the need to reassure local governments they would not be overpowered. The institutional design of RPAG and the various support mechanisms (see Abbott 2001) were the processes by which the collaboration was achieved. In 1990 the roles and processes and expected outputs were undefined and uncertain. The focus was on the process because the shape and content of a regional framework had not been defined. But in a portent of things to come, implementation of the collaborative plan from 1995 onwards was tasked to State and local governments alone.

Stage 2: The exercise of power

A more fundamental shift in the approach to metropolitan regional planning in SEQ started in 2003 and reached its zenith in 2005, in the middle of the collaborative review and updating of the regional framework intended for SEQ2010. In April 2004, the Office of Urban Management (OUM) was created by the State government, following an election promise made in 2003. The Premier, Peter Beattie, promised then to 'overhaul planning laws to cope with Queensland's growing population' and to do this through 'a powerful new office of urban management and infrastructure ... which would have a direct link to Treasury [and so] would better coordinate growth planning and public infrastructure' (Johnstone and Wardill 2004, 6). The Office's role was to create and administer a new regional plan for South East Queensland which, for the first time, was to be statutory and so have the coercive power of the law. A newspaper of the time said that '[the office] is regarded amongst local councils and the development community as one of the most powerful government agencies in the state' (*Courier* Mai*l* 2004, 16).

A draft regional plan was released for public comment in late 2004 and endorsed as a legal document by government in 2005 (OUM 2005). The OUM sat within the Department of Local Government, Planning, Sport and Recreation and reported to the department's Minister, who was at that time also the State Treasurer and Deputy Premier. The regional plan was also, for the first time, specifically tied to the State budget through a *South East Queensland Infrastructure Plan and Program,* a rolling infrastructure provision program that is updated each year and is linked to the regional plan (see, for example, DIP 2009). In effect, from this date there were two planning systems in Queensland, although both operated under the same legislation, the *Integrated Planning Act 1997.* Under the Act the OUM created and administered the SEQ regional plan that directed the planning schemes of the local governments in the metropolitan region, whilst outside SEQ statutory regional plans were only beginning and so each local government had its own planning scheme without regional –level direction (although the plans were also created under the auspices of the *Integrated Planning Act 1997*). Each SEQ local government was required to produce a Local Growth Management Strategy that took into account the directives in the regional plan, and each Local Growth Management Strategy had to be approved by the OUM.

Why did the shift from an advisory, non-statutory collaborative arrangement between local government and the State government to a State government-driven statutory plan occur? Fundamentally it was about implementation –or rather the lack of implementation. This is a problem that has also been identified in other collaborative governance contexts (Weir Rongerude and Ansell 2009). There had been growing concerns that the advisory regional framework was being ignored by both State government departments and local authorities who

were supposed to put it into effect. The framework provided little certainty. The dissatisfaction with the outcomes of the SEQ2001 process is well captured in newspaper reports of the time. SEQ2001 had been seen in the press as 'a planning framework which was supposed to address the growth issues in southeast Queensland up to, and beyond, 2001' (Johnstone 2003, 36). Yet 'infrastructure is yet to catch up with development', 'most [local governments] walked away from SEQ2001 meetings and largely ignored it', State government felt that 'many important lessons were learnt' and 'industry groups will tell you that most state government departments ignored SEQ2001, and the process failed because it lacked teeth, financial support from Treasury and someone to drive it' (Johnstone 2003, 36). The press suggested that SEQ2001 'languished for want of adequate commitment from Government' and people felt that 'the future of their region lies not in their hands but in the hands of individual developers who may or may not have an appreciation of their impact on the state's quality of life' (*Courier Mail* 2003, 14).

Thus, an overview of the history of metropolitan regional planning in South East Queensland, as described in the press, was:

> The future direction of the growth of southeast Queensland was identified as an issue during the 1990s by the then Goss Labor government, which established the SEQ2001 planning framework. In hindsight it was a good idea, but the uncontained sprawl of southeast Queensland makes it evident it was a paper tiger with no power and largely an academic exercise. Its most recent incarnation is the SEQ2021 plan – which might have suffered the same fate as SEQ2001, were it not for the creation of the state government Office of Urban Management (Sommerfeld 2004, 40).

Clearly the collaborative and advisory SEQ2001 metropolitan regional planning approach had been replaced by one that relied on the creation of a new and powerful State government agency. Collaboration had been replaced by the exercise of legislative and state-mandated power. It was not so much planning in the face of power but planning through the use of power – at least for the metropolitan region of South East Queensland.

Stage 3: Hierarchy

Within a few years, however, statutory regional planning was becoming mainstreamed across the whole of Queensland. The Office of Urban Management was not capable of handling such Statewide regional planning. It had been set up to deal with the planning issues in the capital city region, the fastest growing and largest region, in population terms, in the State.

As a result of this, and because of changes in the State's ministerial line-up, there were a series of changes. A new Department of Infrastructure was created in April 2007, which incorporated the role of the Queensland Co-ordinator General (Dept of Infrastructure 2007). The Office of Urban Management was incorporated within this department, leading to the regional planning for the South East Queensland region being located in a different department to that dealing with the regional planning for other parts of the State. Later, in August 2007, parts of the former Department of Local Government, Planning, Sport and Recreation were moved to the Department of Infrastructure to form a new Department of Infrastructure and Planning (DIP 2008). The Office of Urban Management was absorbed within the Sustainable Planning Division of this new department and ceased to exist as a separate agency. The Queensland Co-ordinator General was made the Director-General of the new department. All parts of the State were now being incorporated into statutory regional plans which directed the planning of all local governments in each region and all from within the one government department. In a sense this centralisation of planning into the one department and the single structure was a manifestation

of a strong historical tendency within Queensland towards centralization of administrative functions (Davis 1997).

With this change the shift from collaborative governance through the exercise of administrative power to hierarchy was complete. Metropolitan regional planning for the South East Queensland region was now little different to regional planning for other parts of the State. The planning hierarchy is now clear, as local government plans are to fit within the State-government derived and mandated regional plans. Non-state interests may be involved in plan-making at the local level, and are consulted in regional plan development and modification, but are no longer a formal part of the decision-making process as they were in the earlier collaborative SEQ2001 process.

The Transformations

Collaboration, the exercise of power, and a shift to hierarchy. What lessons can be learned from these transformations?

The collaborative segment of the planning of the SEQ region, unlike the collaborative arrangements discussed by Ansell and Gash (2007: 544), did not emerge as 'a response to the failures of downstream implementation and to the high costs of regulation.' It emerged from a strongly felt and widely expressed community concern with the potential problems if the rapidly increasing population of the region was not properly planned for. But this was married to a deep suspicion and distrust by local governments in the region of the motives of the State government. These were partially the fallout from an earlier and failed regional plan (the *Moreton Region Growth Strategy*).

Yet it is important to note that the mutual trust between State government and the region's local governments eventually built up during the collaborative SEQ2001 exercise carried over into the creation of the Office of Urban Management and the statutory *South East Queensland Regional Plan 2005-2026.* Local governments were concerned about some aspects of the centralised power of the OUM but the role of local governments in regional metropolitan planning was still recognised. As a contemporary newspaper report identified, 'the OUM will work with the 18 councils in the region through the Regional Co-ordination Committee (which will be given statutory recognition as a regional advisory body) and the South East Queensland Regional Organisation of Councils, along with business and community groups' (Parnell 2004, 12). The Local Government Association of Queensland president is reported as saying that 'his organisation was delighted by the [pre-election] promise [of an Office of Urban Management]' and that 'councils will be pleased the government is obviously wanting to make a start in seriously implementing a regional plan for southeast Queensland' (Johnstone and Wardill 2004, 6).

On the other hand, although the earlier SEQ2001 collaborative process deliberately included a wide representation of stakeholders (including a number of State government departments, local governments, the development industry, environmental and conservation interests, the unions, and professional groups) when, in about 2003, the Regional Framework for Growth Management the collaboration had produced was being seriously questioned, each of these groups was quick to blame other participants for any perceived shortcomings in the plan's implementation. There was little real sense of ownership of the regional framework. During the collaborative SEQ2001 process a range of organisations and stakeholders were represented on RPAG as well as having inputs through the attached technical support structures and through responding to a range of discussion documents. Then over time people moved on, new presidents of peak bodies were elected and the sense of direct 'ownership' of the resulting

regional framework became diluted. Just because an identified organisation has agreed to be represented in a collaborative process and signs off on a proposal at a specific time does not mean that its commitment can be retained for the long term. This can be illustrated through an anecdote concerned with the author's teaching. In 1999 the author ran a regional planning studio in a planning program at QUT. The project that semester started by getting students to interview stakeholders involved in the SEQ2001 process to assess how well the plan had achieved each organisation's objectives. The fundamental difficulty that faced students was finding the people in the relevant organisations who knew anything about the SEQ2001 negotiations (a mere four years after the regional framework had been signed off). This was particularly problematic for private sector participants, such as the Property Council of Australia and the Urban Development Institute of Australia. The representatives directly involved were often no longer there, and the remaining representatives had little idea of why the organisations were involved and what they had agreed upon.

Conclusions

The question this paper tried to address was what happens in the longer term after collaboration in planning? After all, implementation is a critical part of effective planning. Much of the literature on collaborative governance deals with the process of reaching consensus, agreement or a decision. This case study illustrates the importance what happens after we reach 'Yes'. It shows that collaboration may not hang together for the long term, and that those who were involved in creating a consensual output do not necessarily retain their commitment. This has a direct, and negative, impact on the implementation of the agreed decision.

Part of the problem in for SEQ2001, however, was that collaboration was tied to the regional framework being advisory rather than statutory. In 1990, collaboration (particularly between State government and local councils) was needed to produce a regional plan; but collaboration was possible only if local councils (and the various line departments of State government) retained their independent decision-making powers. This structure was the incentive through which collaboration was sold to the relevant participants. By 2003 this was widely identified as the fatal flaw in the implementation of the regional framework. Neither local governments nor line departments were committed to making decisions in line with the agreed regional framework.

The major lessons for metropolitan regional planning that arise from this South East Queensland case are (a) that collaboration and collaborative governance can successfully overcome antagonism and develop trust and lead to an agreed outcome, but that (b) the outcome may need more clout than is often implied in the collaborative governance literature in order for there to be successful implementation. Collaborative governance must be for the long term if it is to be successful. Collaboration to reach a regional consensus needs to be combined with an on-going commitment to regional goals if the collaboration is to continue on past 'Yes'. But another major lesson is that collaboration can build the elements of trust that lead to support for more forceful hierarchical implementation, at least at the regional level, if the collaborative process falters during implementation.

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Collaborative City Liveability Study using Gehl Methodology: Pedestrian and Bike Counts and Stationary Activity Survey Penrith

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Abstract

Penrith Central Business District is one of the regional cities of New South Wales that have been selected for substantial growth in the near future. The use of public space by pedestrians and cyclists is examined to provide a technical tool for future decisions made by planners and urban designers. This paper discusses the data collected and the observations recorded during a study of public spaces in Penrith CBD by a group of UWS planning students. The method for collecting data was largely based on the techniques employed by Jan Gehl in his Public Spaces and Public Life studies.

A survey documenting: 1) the number of pedestrian and cyclists and 2) observing the stationary activities was carried out over a period of two days to indicate the quality of urban space in Penrith CBD. The purpose of this study was to: identify the number of pedestrians at specific locations and times, examine the amount and type of cyclists, recognize the behaviour and decisions of pedestrians using the urban space and document the pedestrian life of the city.

This paper presents the findings of the survey as well as analyses the suitability and adaptability of the Gehl methodology. The paper also sheds light on the aspects of mutual benefit of this study for the city and the university.

Penrith City in Sydney Metro

Penrith is located on the foothills of the Blue Mountains on the western fringe of the Sydney metropolitan in New South Wales, Australia. It is approximately 54 kilometres from Sydney CBD. The City of Penrith covers an area of around 400 square kilometres on the Nepean River flats of the Cumberland Plain. In 2001 population of Penrith City was about 172,000.

Figure 1: Penrith Location in Sydney Metro

Improved pedestrian amenity incorporated into future developments

within the Penrith CBD will create a more lively, vibrant and environmentally friendly urban city life. Penrith City recognizes that, to understand how liveable a city is, data that is clear and definitive is needed by which its success or otherwise is judged.

Figure 2:Penrith as a Regional City/Growth Centre in

NSW State Government has identified Penrith City Council, along with five other town centres, as a growth centre in the Metropolitan Strategy (see Fig. 2). Penrith is set to become a centre of economic and cultural expansion in Greater Western Sydney. In light of this Penrith City Council has developed a strategic plan looking at the future of the city and how the city can become more sustainable (Penrith City Council, 2009). One of the steps in this development is to understand how the city is currently used. This will serve as a base for future re-evaluation. Penrith City Council requested the assistance of the Planning Program at the University of Western Sydney in conducting a study based around the work of Jan Gehl, to look at how the city is currently used by pedestrians.

Objectives of the Observational Study

The purpose of this study was to examine how public spaces are being used by pedestrians, cyclists and people simply using the city's urban spaces. This study provides information as to where people walk and/or gather either as part of their daily activities or for leisure/recreational

purposes. This information will form the basis for future decisions regarding which streets and routes to improve, in order to make them not only easy and pleasant places to move through but equally important attractive places to visit and spend time in.

The specific objectives of the study were:

1. Count the number of pedestrians at specific locations and times.
2. Survey stationary activities (behaviour mapping including age/gender and general mobility)
3. Count the number of cyclists
4. Document the findings and present an analysis/summary of the pedestrian life of the city.

Ghel Study of Penrith

The methods used by the Gehl Architects for pedestrian counts and the stationary observations include strict guidelines as to the days and times which are to be studied. Gehl states that for a study to be truly reflective of the nature of the city the fieldwork must be completed over an extended period of time which must include weekends and weekdays (the days Monday and Friday are not recommended by Gehl as he attributes these days with having non-typical flows of pedestrian traffic). Ghel recommends the fieldwork to take place at 2 different times of year, summer and winter, so as to gain a complete picture of the city. The fieldwork must take place over an extended period of time through the day and night.

Gehl methodology is a structured way of collecting information about the pedestrian and cyclist flows and about the activities people engage in while hanging out at open spaces. The methodology section outlines Gehl techniques. The main strength of Gehl techniques is their utility for collecting, collating and comparing data in longitudinal studies on liveability in cities.

Gehl Architects conducted a study for the City of Sydney in 2007 (Gehl Architects, 2007). The study undertaken by the University of Western Sydney on behalf of Penrith City Council is of a more narrow focus looking at the pedestrian traffic numbers at strategic points across

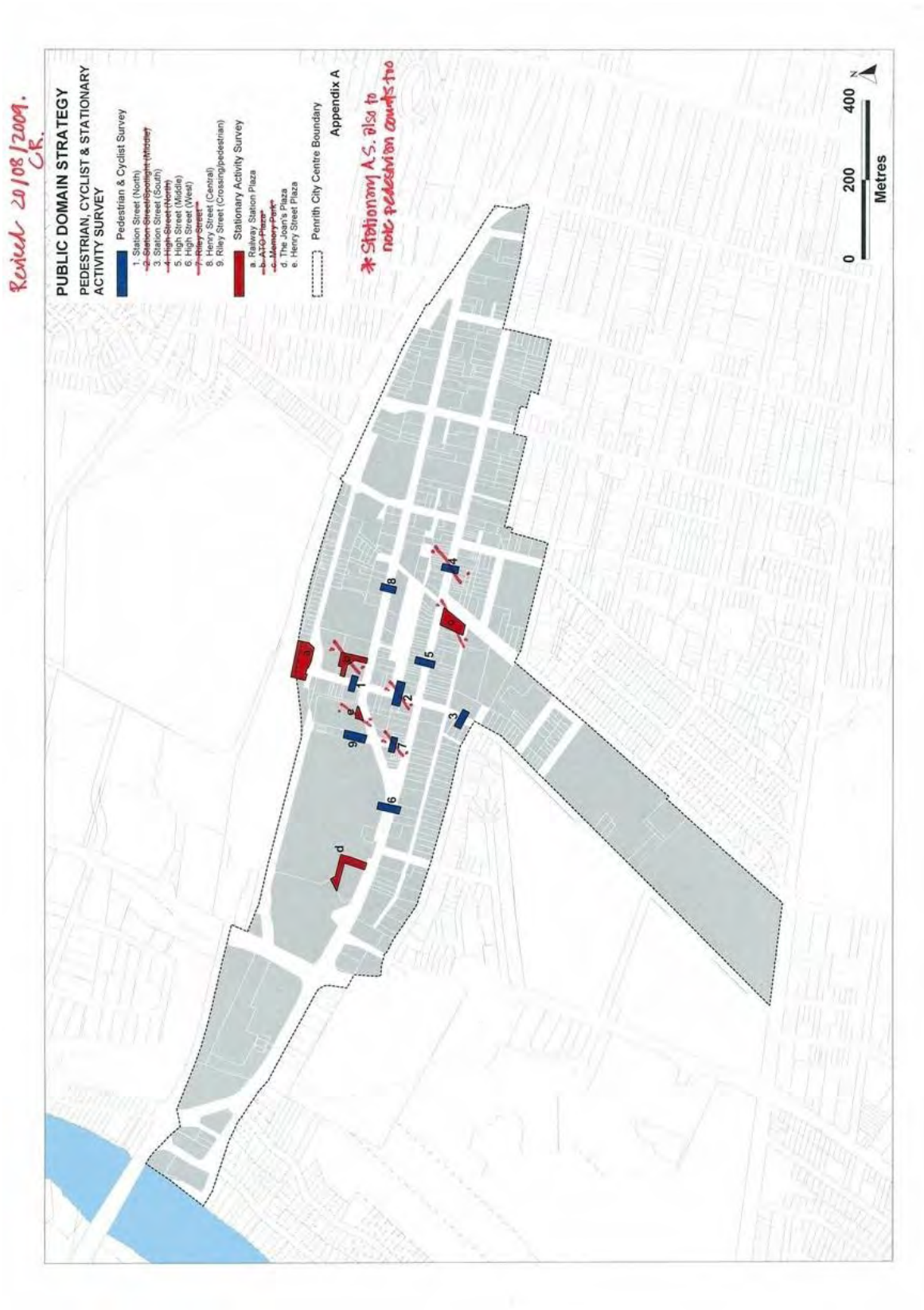


Figure 3: Location of the eight study sites in Penrith CBD

the city. The survey study was carried out at eight locations in Penrith CBD over a period of two days (a week day and a weekend day). It looked at the number of pedestrians using an area at 6 sites (Fig. 3) to gain an understanding of pedestrian traffic in the city. The pedestrians were counted in 15 minutes interval over three separate time periods of 2-3 hours.

The aim of the observational study, undertaken at 2 sites in the CBD (Fig. 3); Railway Station Plaza and the Joan Sutherland Plaza, was to observe the stationary activities classified into 4 categories of standing, waiting for transport, sitting and other. The observations occurred at 3 one hour times throughout the day, 10am, 12 noon and 3pm. The study also included a 10 minute observation of the people who were engaging in these activities placing them into gender and age categories.

The study focused on a number of different factors including; how pedestrian friendly is the city, how many pedestrians used the city, what paths were the pedestrians and cyclists taking to get around the city, the amount and accessibility of open spaces, among other issues. The aim of this survey was to gain a perspective and estimation of the usage and roles of different public spaces.

Methodology

The method of collecting this information is based on simplified Jan Gehl procedure for collecting information on pedestrians and cyclists. It concentrated on specific inner urban street grid within Penrith's CBD. Over a total period of two days (Tuesday 8/9/09 and Saturday 12/9/09) the students undertook counts for pedestrians/cyclists as well as made observations on selected Penrith City Centres urban spaces. Figure 3 depicts the locations that were studied.

For above mentioned two days, the pedestrian and cyclist counts and related observations were carried out for the morning, lunchtime and after work periods of: The morning peak between 8-11am, 12 noon – 2 pm for the lunch period and after work peak from 4pm to 6pm. (only on Tuesday). The actual counting took place in 15 minutes intervals (with 15 minutes breaks in between). For cyclists, the counting time was the same.

A survey of stationary activities (behaviour mapping including age/gender) was also carried out at the two locations of Joan Sutherland Plaza and the Penrith Station. During the above referred to two days, observations were recorded on how the urban spaces are being currently used (standing, sitting, waiting for transport, culturally active, playing/physically active). In addition the age and gender of those observed were also recorded. The timing of the observation was from 10am to 4pm with observations made on every alternative hour followed by observations

of age and gender recorded defined into four basic groups (children-14years, young adults 15-30 years, middle aged 30-65 years and elderly 65+ years).

Pedestrian and Cyclist Survey (Case Study) Sites

Pedestrian and cyclist survey and related observations were carried out at the following six sites. Students made observations on each side of the street public footpaths. In addition to the exact counts, the students made note of where they stood/sat and anything interesting that took place during their count. The location of these sites is shown in Figure 3.

Case Study Site 1 - Station Street North

The student making observations concentrated on north – south movement. Observations were made on both sides of the street.

Case Study Site 3 - Station Street South

The student concentrated on north – south movement on both sides of street

Case Study Site 5 - High Street Middle

The counting was carried out on each side of the street on public footpaths. The student concentrated on the East-West movements between the raised threshold crossing areas with large trees.

Case Study Site 6 - High Street West

The student recorded the pedestrian flow along High street particularly the southern side as well as on the crossing over the signalised lights

Case Study Site 8 - Henry Street Central

The student made counts on either side of the street on public footpaths. The tree with shade and seats on the street were also monitored.

Case Study Site 9 - Riley Street

Counting concentrated on large pedestrian volumes using the crossing connecting two sides of the shopping centre.

Stationary Activity Study Sites

In the stationary activity survey the emphasis was on to observe and record how these spaces are being used - sitting/standing/waiting for buses/moving through. Total numbers and demographic composition of people using these spaces was noted in this survey.

Case Study Site a - Railway Station Plaza

The paved space with the shelter, between the grass to the east and the trees in paving to the west was observed.

Case Study Site d - The Joan Plaza

The site between Westfield's entry and High Street, the full width of the space including covered walkway and grass and diagonal path was observed.

Observations and Analysis

Penrith Central Business District is one of the regional cities of New South Wales that will experience substantial growth in the near future. The use of public space by pedestrians and cyclists are examined to provide a technical tool for future decisions made by planners and urban designers. This section discusses (some of the) data collected and the observations recorded during a study of public spaces in Penrith CBD.

As stated earlier, the method for collecting data was largely based on the methods employed by Jan Gehl in his Public Spaces and Public Life studies. Jan Gehl is responsible for the revitalisation of many cities across the world. Central to his work is the philosophy that a stronger coherence should exist between the built environment and life lived in the spaces created in these environments (Gehl, 1987). Gehl mentions three types of activity – necessary, optional, socialising – these are encouraged/ discouraged by physical design. Jan Gehl has developed a methodology for improving city environments which focuses on gathering data on the human

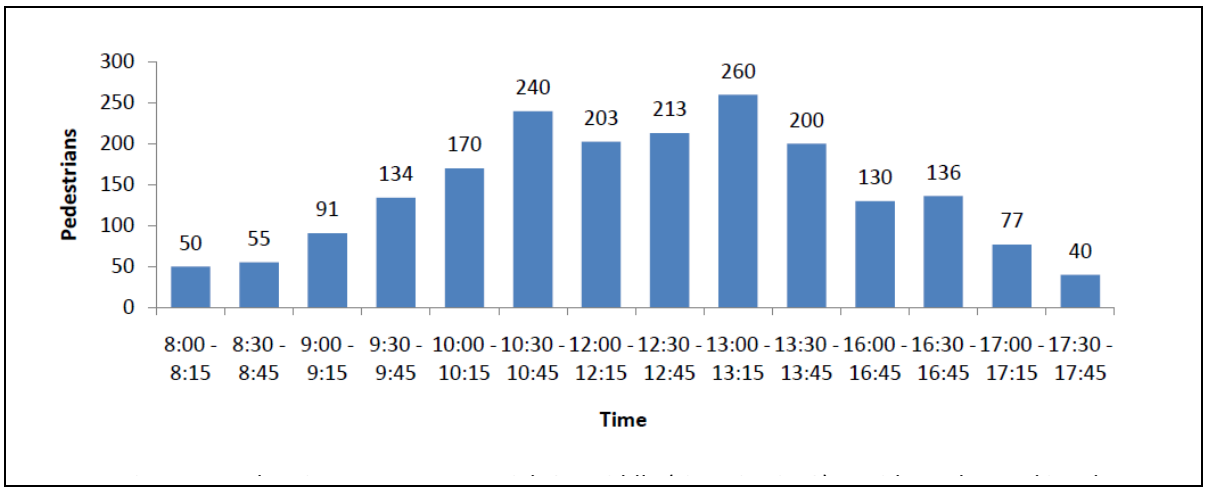
dimension in the first instance. Changes based on the empirical data collected are then made in an effort to improve quality of life in public spaces. The success of these changes is measured through follow up studies.

The amount of pedestrians, cyclists and the use of urban space are observed under the methodology of Jan Gehl. Gehl aims to develop a clear picture of the quality and liveability of the CBD public domain, and to underline the importance of public life, walkability, accessibility and city vitality.

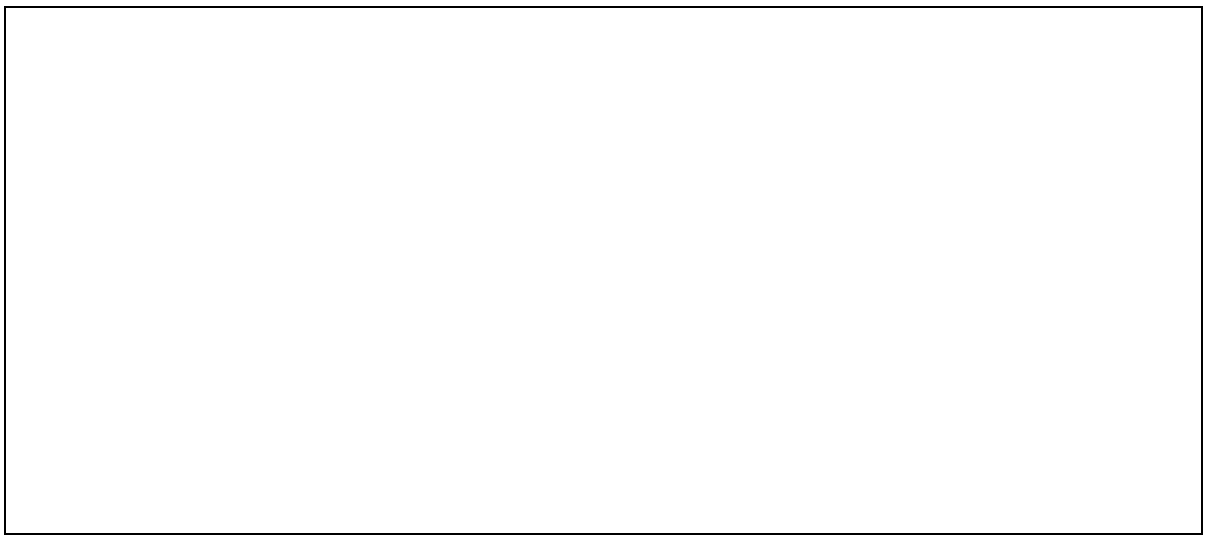
A survey documenting: 1) the number of pedestrian and cyclists and 2) observing the stationary activities was carried out over a period of two days to indicate the quality of urban space in Penrith CBD. The purpose of this study was to: identify the number of pedestrians at specific locations and times, examine the amount and type of cyclists, recognize the behaviour and decisions of pedestrians using the urban space and document the pedestrian life of the city.

The first day of the survey was Tuesday 8th September 2009 (cloudy/sunny and the temperature: 20°). This day was chosen to represent an average winter weekday for pedestrian activity. It was also chosen because it falls in the middle of the week in order to act as a representation for other days during the week. The second part of the survey took place on Saturday the 12th of September 2009 (sunny and the temperature: 29°). This day was chosen to represent an average winter weekend day for pedestrian activity. Pedestrian counts were performed hourly on those two days. The counts covered 3 distinctive peaks; morning peak, lunch time peak and afternoon peak. It is important to note that the late Saturday afternoon was not part of the survey for not being that busy. A summary of findings from some of the locations surveyed is given below:

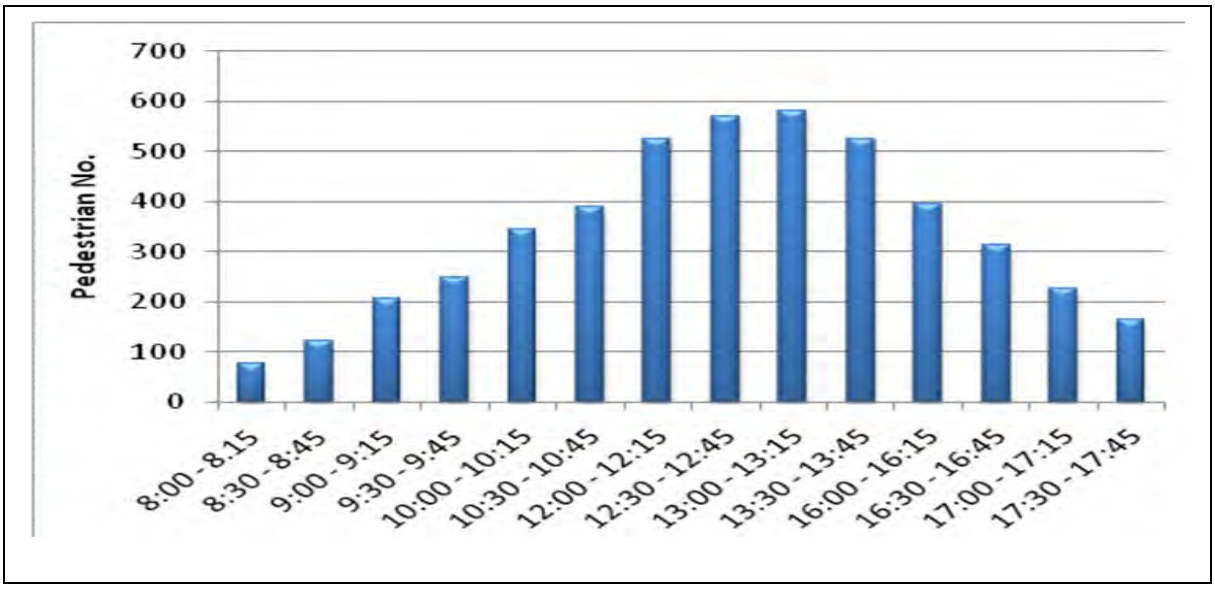
The pedestrian and cyclist activity in the middle of High Street, Penrith is greatly impacted by the surrounding shops. The pedestrian flow ranges from about 200 per hour to about 1000 per hour (see Fig. 4). The pedestrian numbers are similar on weekdays and on weekends. From the observations it was seen that pedestrian activity increases as the shops start to open with pedestrian activity peaking around lunch time, then it slowly decreases as the shops start to close. The shops are therefore main source of pedestrian activity. The shop fronts in the area are not very visually attractive. As a matter of fact the whole area is not very aesthetically pleasing. Accessibility in the area is another important issue as a significant proportion of the pedestrians is elderly. The cyclist activity is almost nonexistent in the area probably because the Penrith City as a whole is poorly constructed for the use of bikes.



Henry Street is central to many facilities of Penrith CBD. It links to many services and helps pedestrians reach various destinations. It is used more on weekdays than on weekends. The pedestrian flow ranges from 100 per hour to about 500 per hour on weekdays (see Fig. 5). The higher numbers are mostly for the middle part of the day. The survey revealed that Henry Street lacks adequate furniture particular seating, lacks variety in retail activity as pedestrian attractor and lacks provisions for cyclists.



Riley Street at the junction of the two sections of the Westfield Shopping Mall is mostly used by pedestrians crossing the street to continue their stroll through the shopping mall. A very high volume of these pedestrians can be observed. During working days the pedestrian flow between 12 noon and 2pm is over 2000 per hour (see Fig. 6). On weekends this number is even higher. At its peak it was observed to be 3500 per hour. Riley Street in itself is rather bland. It lacks any kind of pedestrian attractions such as street art. The benches on the street are not strategically located and are poorly designed (are without backs). The existing pedestrian crossing is not well designed either.



Railway Station Plaza is located at the northern boundary of the CBD at the intersection of Station Street and Belmore Street. The train station is a major stop along the Western and Blue Mountains Lines and as such is a hub of activity. Railway Station Plaza is an area of constant activity which has the potential for becoming a pleasant place to spend some time. The results from the fieldwork show a very low number of people sitting during the observation times on both days. It is attributed to unavailability of seating apart from that of the bus stops. There is also very little natural shade available for patrons. A number of people can be observed coming from the Westfield Shopping Mall to the taxi stand at the Railway Station Plaza with trolleys full of groceries. This is due to inadequacy of the taxi stand at the shopping centre.

The Joan Plaza is located in the heart of the Penrith CBD, South-West of the Penrith Westfield and South East to the Penrith City Council. It is characterised as an open spaced environment with a natural landscape, within close proximity to the Westfield. The Joan Plaza lacks any decent grass for people to sit on. The footpath along the cafe is narrow and hinders the flow of movement. People wheelchair bound or with baby prams have to move off the path onto grass to continue their journey which is inconvenient as well as degrades the grass. At the moment there is very limited seating capacity in the plaza. Joan Plaza is a hanging out place for the youth. There is a lack of activities to engage this demographics at the Joan Plaza.

The observations and counts at eight different sites across the Penrith City CBD have been elaborated in much more detail in the rest of this report. The generalized findings from all sites point to: 1) lack of provision of clear, unobstructed, adequately dimensioned and proportioned pedestrian paths; 2) shortage of well positioned seating; 3) near absence of landscaping elements for sitting and shade; 4) poor design of street crossings and; 5) absence of facilities for cyclists.

This study is an ongoing and evolving process. The findings in this report have been deducted from the survey of winter 2009. It is envisaged that a second part of this study will be conducted in summer of 2010.

Discussion and Conclusions

Jan Gehl is a big name when it comes to discussion on remodelling cities to make them pleasant places for pedestrians, cyclists and people engaged in outdoor activities. However, his prescriptions are pretty constant. His solutions do not take into account the cultural contexts. My urban planning colleagues at the University of Western Sydney thought Gehl's methods were irrelevant for Australia. For Australians outdoor activities mean going to a beach (not some part of the busy city). Also not everyone agrees with the inevitable slowing down of the city that Gehl prescriptions warrant. Glancey (2008) considers Gehl solutions soulless and bland. Conservative commentators, like Miranda Devine (2007) dismiss his ideas as utterly impractical and utopian.

In Penrith the pedestrian activity is largely related to walking to shops and cafes (from parking lots) and from train station to places of work. The largest pedestrian movement is that of people crossing Riley Street to continue walking in the shopping mall to access the other side of the mall. The cyclist traffic is minuscule in Penrith CBD. There is a lack of public amenities like benches and shade, the urban design at places is very unattractive and there is a lack of dedicated bicycle paths and bicycle parking stations.

There is a tension, not only in Penrith but elsewhere in Sydney, between the outdoor living and the security concerns. In parts of Sydney the formerly pedestrinized streets are being opened to traffic to discourage hanging out of the undesirable elements. The open space between Westfield and the Joan Sutherland Centre faces this dilemma in particular. It would be desirable to provide more amenities to encourage use of this space but hanging out of undesirables (already using this space) would be a community concern.

Students were very pleased because they could see the relevance of their exercise for local planning. Interaction with the council, a prospective employer, was an added advantage. They were briefed by the council before the survey, were assisted on the day of survey and presented their findings to the council staff after the survey. The council was very pleased to come in touch with the planning students and was delighted by getting the survey done without incurring any cost.

Questions were raised by planning colleagues on the relevance of Jan Gehl methodology for Penrith (a small CBD on the fringe of the metropolitan). They were even sceptical of its relevance for Sydney CBD. However, it is my opinion that Gehl principles (Gehl 1987) are relevant for all settlements. At its core is the idea of creating pleasant outdoor spaces in cities to encourage outdoor activities.

Gehl methodology has helped us systematically collect base-line data on pedestrian use of the Penrith CBD. It has also helped us identify the elements of urban design that need improvement. How will the council incorporate this information into their planning and eventually what improvements will flow from it remain to be seen.

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Thanks are also due to Cleveland Rose, Karin Schicht and Terry Agar of Penrith City Council for providing us with insight into the Council's planning and our students an opportunity to carry out a practical and interesting exercise.

Ethics and the PhD Planning Student

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"A profession is as good as its ethics"
(Schurr 1982, p. 334)

Abstract
The premise of the paper is that PhD planning students are future planning practitioners, academics and researchers, and as such, need to be fully versed in the complexities of ethical research while still at university. While many PhD students are competent in the language of procedural ethics, it is questionable whether or not they fully understand, appreciate or are even aware of the many intricacies of ethics in practice. By incorporating a group based discussion format ethics training throughout PhD student's candidature, faculties and planning schools can encourage the development of ethical integrity in order to better deal with issues which may arise in their professional lives as planning practitioners and researchers. Interest in this topic was sparked by the work of Mello (2009) who explored the issue of ethics training for PhD planning students in Italy. This paper will contribute to an existing small, but growing body of literature on training PhD students in ethical planning research protocol.

Introduction

Folse (1991, p. 344) states that the primary purpose of graduate education is "to prepare students to be professionals capable of teaching and conducting research that is ethically sound." Although the focus of this paper is on the PhD student, the author believes that ethical training should be incorporated into university curriculum in all disciplines and all levels of a student's candidature to varying degrees. Teaching ethics in higher education gained interest in the United States in the mid 1970s at the Hastings Center Institute of Society, Ethics, and the Life Sciences (Kaufman 1981). The medical sciences were pioneers in incorporating formalised ethics courses into the curriculum hoping to provide future physicians with the tools for moral inquiry, reflection about their practice, and their development of "values, social perspectives and interpersonal skills" (Tysinger, Klonis, Sadler et al 1997, p. 315). The scholarship of teaching ethics at a university level came as a response from a range of professions expressing concern "about the moral problems of their work and the deficiencies of professional schools in preparing their students to meet them" (Hastings Centre Report 1980, p.*vi*, in Kaufman 1981). The report states: "to leave ethics out of a curriculum makes little sense...Our only contention is that serious and systematic work in ethics will enable students to grapple, at a mature level, with questions they will inevitably have to face, both in their present and in their future life" (Hastings Centre Report 1980, p. 2, in Kaufman 1981). The Hastings Report set the benchmark for what would later become a two faceted approach to ethical research; systematic, yet personal.

Although the Hastings Report instigated growing concern in the teaching of ethics in some of the professions, (i.e. law, planning, medical), it was rare that academic staff in these disciplines were well-versed in the teachings of moral philosophy. According to Kaufman (1981, p. 31) there was no evidence of any ethics course being taught in planning schools; he states, "since ethics has a decidedly small constituency among planning faculty—most planning educators lack substantial

background in philosophy, let alone moral philosophy."[4] However, Kaufman also states that ethics was being introduced sporadically in some planning classes; being taught as an "add-on" in the usual curriculum (Kaufman 1981). This apparent gap in planning curriculum was the impetus for a body of work on teaching ethics in planning schools initiated by Kaufman and Howe (1981; 1987; 1993). Their work provided a general framework for discussion about and implementation of ethics courses in planning schools. Like the Hastings Report, Folse (1991) believes that training in ethical research for graduate students needs to be incorporated in the curriculum; it needs to be an initiative that is supported at a micro level (the department/faculty) and a macro level (the university). Perhaps it is time to revisit this notion of ethics courses being fully integrated into planning curriculum—specifically with PhD students.

Literature on ethical research is broad and has covered topics such as: the relationship between the researcher and researched (Bhattacharya 2007); teaching ethics (Kaufman 1981; 1987; 1993; Pritchard 2005; Schrag 2005); environmental ethics (Martin and Beatley 1993, Cook and Sarkissian 2000); ethics as a procedure and as a practice (Guillemin and Gillam 2004); ethics in interpretive qualitative research (Denzin and Lincoln 2005); ethics in qualitative inquiry (Nespor and Groenke 2009); virtue ethics (Thomas 2009); ethical issues in PhD training (Mello 2009) and ethics in consultancy (Healy 2009). This paper reviews a portion of the literature about ethics in general and ethics in planning research, specifically.

The premise of the paper is that PhD planning students, like practitioners, do not exist in a vacuum. PhD students are more than a single entity working in isolation; they are future planning practitioners, academics and researchers, and as such, need to be fully versed in the complexities of ethical research while still at university. While many PhD students are competent in the language of procedural ethics,[5] it is questionable whether or not they fully understand, appreciate or are even aware of the many intricacies of "ethics in practice" (Guillemin and Gillam 2004). By incorporating a group based discussion format ethics training throughout PhD student's candidature, faculties and planning schools can encourage the stimulation of their 'moral imaginations' (Kaufman 1993) in order to better deal with any ethical issues which may arise in their professional lives as planning practitioners and researchers.

Although this paper explores ethics as pertaining to both quantitative and qualitative research, Guillemin and Gillam (2004, p. 263) suggest two ways of viewing ethics in qualitative research; as a procedure and as a practice. Their framework, I believe, is applicable to both quantitative and qualitative paradigms. The following sections address ethics as procedure and ethics as a practice in a planning education framework for the PhD student. The paper continues with a discussion of the formation of a new type of a community of practice within the PhD planning student cohort. The paper concludes with suggestions for future scholarship in the teaching of ethical research in the planning discipline. This paper acknowledges the varying degrees of ethical protocol throughout the disciplines, and therefore focuses the discussion of ethics in this paper as applied in the planning discipline.

[4] The author acknowledges that this article was published 28 years ago and believes that there has been an increasing trend with planning educators to have acquired some level of moral philosophical grounding.

[5] Procedural ethics is the formal process of submitting an ethics application to an ethics committee seeking approval to progress with the research (Guillemin and Gillam 2004). This will be discussed further below.

Ethics as Procedure

Potential research to be conducted involving humans or animals within a university must undergo a formalised process of ethical review consisting of application and either acceptance or rejection of the project. Guillemin and Gillam (2004) refer to this as procedural ethics. In research universities there are dedicated groups of people who review applications from academics, students and affiliated research centres wishing to conduct research involving humans or animals. In most cases these groups of people fall under labels such as the: Human Research Ethics Committee (HREC), internal review board (IRB), Human Research Ethics Advisor Panel (HREAP)[6], University Research Ethics Committee (UREC) or some slight variation, thereof.[7] HRECs at universities are responsible for monitoring research ethics conducted and/or associated with the institution (Crotty 2006).

Guillemin and Gillam (2004, p. 268) believe that the purpose of research ethics committees are to fulfil the requirements of protecting the basic rights and safety of research participants from any forms of abuse which may occur during their participation in research projects. They further contend that the formalised procedure of submitting an application to a committee provides the researcher with a tangible list, or "checklist" of ethical issues that need be considered through the duration of their research project. This checklist reminds the researcher to consider issues such as "the potential risks to participants, the balancing of the benefits of the research against those risks, the steps needed to ensure confidentiality of data, and the inclusion of consent forms and plain language statements in the material provided to participants" (Guillemin and Gillam 2004, p. 268). Of major importance is the ability of a research ethics committee to force researchers to reflect on potential harm the research may inflict on participants involved in the research. In regards to qualitative research, Guillemin and Gillam (2004, p. 272) state, "the potential harms to participants in qualitative research are often quite subtle and stem from the nature of the interaction between researcher and participant."

Crotty (2006) on the other hand believes that ethics committees are not about ethics, but are more about a form of etiquette and a type of research practice that the research community is resolute in maintaining. "HRECs exist not to maintain the ethical health of researchers by discussion but to give advice on the practicalities of this particular research proposal, to measure risk management given legal and governmental legislation. ...HRECs require researchers to behave in a fashion that is accepted proper by the research community" (Crotty 2006, p. 56). For Crotty, the process of applying to an ethics committee is more about ensuring the avoidance of undesirable issues and consequences before they arise, ultimately keeping in line with the practices and protocol of the research community. Although completing a research ethics application is often times considered a laborious task, approval of one's research, whether it be as a postgraduate, academic or research officer, confirms a researcher's affiliation with a university and carries with it a 'stamp of approval'. This is a helpful aid in designing a research project that will be ethically acceptable in its broad methodology.

The functioning of the ethics committee on a procedural level is vital when safeguarding the rights of participants involved in research as well as maintaining a standard of ethical behaviour in the means by which researchers recruit participants, conduct their research, and ultimately analyse and publish their data. However, as discussed by Guillemin and Gillam (2004, p. 269) the procedural aspect of ethics in research is not the only part of the ethics equation. They state that

[6] Ethics advisory panels typically function at the departmental/school or faculty level. Their role is to handle ethics applications within their given disciplines that involve minimal ethical impact. For research that might involve significant ethical concerns, a university-wide committee may be used instead.

[7] For clarity throughout this paper I will use the term 'ethics committees' and assume that their rigour and analysis of applications covers panel advisory guidelines as well.

"it is within the dimension of 'ethics in practice' that the researcher's ethical competence comes to the fore" and therefore having the ability to "acknowledge the ethical dimension of research practice, his or her ability to actually reorganise this ethical dimension when it comes into play, and his or ability to think through ethical issues and respond appropriately." It is when a researcher is 'in the field' that ethical practice becomes a series of actions based on personal assumptions and decisions centred on research methods and techniques and a time when ethical behaviour cannot be monitored by an ethics committees. Researchers in the field are solely responsible for their actions, and there is no checklist for them to follow when presented with morally challenging situations. Their ideals and values should intrinsically reflect those of the academic community at large, and their motivations in their pursuit of knowledge should be noble.

Thomas (2009, p. 35) also believes that ethical approval and codes of conduct as procedures are secondary and argues that it is more important to have researchers who have inherent ethical conduct. He states that "whatever safeguards, procedures, mechanisms there are to monitor or review research before, during or after it is undertaken there will still be times when researchers are on their own" (Thomas 2009, p.36). It is therefore important to realise that the ability to fulfil the requirements of the university ethics committee does not mean that a PhD student is prepared for the many ethical issues which may arise when research is begun in the field. The procedural side of research ethics may help in ensuring better ethical standards and help researchers become aware of possible issues which may arise, but this paper reiterates that a blanket solution for maintaining ethical standards in planning research is not comprehensive and does not ensure ethical behaviour from PhD students. Of more importance is the researchers' moral compass over any external sources which may offer guidance. Once an ethics committee has approved a researcher's methodology, what guarantee is there that ethical practice will be upheld in the field? The following section explores the notion of ethics in practice from a planning perspective.

Ethics as a Practice

Ethics, as defined by Upton (2002, p. 254) "is about how we manage relationships, and therefore responsibilities." Ethics is about the things we do and the things we feel we should not, or could not do, with a clear conscience. Ethics, by nature, is an intricate and multifaceted subject and one which is usually engaged with on a personal level (Mello 2009). For purposes of this paper, Guillemin and Gillam (2004, p. 264) explain ethical practice as being "the day-to-day issues that arise in the doing of research."

Ethics as a practice can be first introduced in a classroom setting. Kaufman and Howe's experiments in teaching planning ethics courses in the 1980's were a sound starting point from which to develop pedagogical approaches to include ethical discussions amongst students, enabling them to become more capable of identifying ethical issues as well as developing a greater sense of personal responsibility and moral obligation in their research (Kaufman 1981). It is apparent that a new community of practice needs to be established where the moral development of a student is considered, ensuring that they are ethically minded in their research and methodology. That is, it is just as important to foster what they feel about things, what they think, and not just what they do (their actions), in their research. As Thomas (2009, p. 34) states, it is "preferable that a researcher abhor the possibility of exploiting vulnerable research 'subjects'" rather than just being concerned about being caught out if they do engage in exploitation. This is important when the very nature of planning is so inextricably linked to society in general, and should be concerned with the best interests of that society. Lo Piccolo and Thomas (2008, p. 17) believe that, "planning research, like any kind of social science

research, is an intervention into people's lives," and as such, we need to handle this involvement with due care.

As mentioned in the introduction, the teaching of ethics and ethical research practice has not been a part of specialised planning degrees, except where it has been added on to already existing curricula. Cook and Sarkissian (2000) identify the lack of guidance in planning education in regard to what planning students are taught about ethics; in particular, between the professional responsibilities of planning professionals and the political environments where they may be working. Additionally, understanding ethics can be equally confusing where ethical dilemmas may abound between personal and professional ethical standards. If no formalised training for PhD students exists which deals with ethical issues then the concern students have for research ethics is based on the subjectivity of their own personal integrity (Mello 2009). It is therefore critical that students have the inherent ability to maintain the principles of ethical research when faced with situations which they may not have been aware of. Ultimately, planning students must be made aware that their own concept of ethical behaviour is a subjective one and not based on concepts which have been rote learnt from their professors, who more often than not are constrained by their position as educators in a professions-based degree (Cook and Sarkissian 2000). The focus of planning education has for too long been on 'useful' subjects which aid students in attaining employment (Cook and Sarkissian 2000, p.20).

While there can be no singular, normative class which teaches ethical planning at postgraduate or even undergraduate level, it is nonetheless important that an attempt is made to stimulate the 'moral imaginations' of students by encouraging them to participate in open discussions with fellow students. This format will hopefully discourage students from simply regurgitating ethical guidelines by enabling them to engage directly and personally with ethical dilemmas.
According to the Planning Institute of Australia, (PIA), the professional code of conduct is "to provide guidance and support to planners to ensure that they practice their profession with the highest ethical and professional standards and earn the confidence and respect of the community which they serve" (p. 2). PIA also states that "the integrity of planning decisions, and of the planning system as a whole, relies upon the integrity of the planners who serve it, in whatever capacity" (p. 2). Guillemin and Gillam (2004, p. 263) believe that "in terms of usefulness in addressing ethical issues that arise in practice, professional ethical codes are largely not practical or applicable and can serve only as general guidelines." While these guidelines may help in the procedural aspects of planning, they do not cover all of the possible ethical issues which PhD students may come across in the field as planning professionals, nor do they stimulate the moral imagination of students which would allow them to hone their analytical skills enabling them to arrive at ethical judgements (Kaufman 1993). Qualitative researchers specifically, may be involved with vulnerable populations, such as minors, victims, prisoners and persons with neurological impairments, and they need to consider the special needs of these participants (Creswell 2009). It is important for PhD students to be aware that "ethical practices involve much more than merely following a set of static guidelines, such as those provided by professional associations" (Creswell 2009, p. 88). While professional planners in Australia are guided by the code of conduct set out by the PIA, PhD students are required to follow the research code of ethics as put forth by their university; these guidelines, again, are often times generic and follow similar protocol and themes as the ethics application.

Communities of Practice

deMarrais (2004) believes that one of the most important challenges universities have with current and future cohorts of PhD students is preparing them as educational researchers. The

hurdle for supervisors and faculty is ensuring these students are willing to take on difficult social and educational problems, and in turn be able to communicate these problems to education practitioners and policy makers. This is especially the case with planning students as their field of enquiry and eventual professional role is linked so explicitly to the public interest. Upton (2002, p. 254) believes that planning, in essence, is "spatial ethics". When viewed in this sense, the need for planning students to act ethically in all that they do becomes apparent. But how do students gauge their moral compasses in a vacuum when no specific training is given as to how to go about tackling difficult ethical questions?

Folse (1991, p. 348) believes that, in universities, the teaching of ethics as well as a "strong commitment to ethical practices" should not be viewed separately. Folse (1991, p. 348) states, "universities appear to be becoming more concerned with controlling or minimizing unethical practice." In both teaching and research practices, there seems to be a concern with an increase in ethical misconduct in the form of plagiarism, and so it has become a high concern to teach ethical behaviour to students. Ethics teaching is undoubtedly a part of planning curricula, even if only an add-on component, but as Folse (1991) speculates, can ethics be learned?

Cook and Sarkissian identify a "sparseness of ethical discourse" in professional planning fields (2000, p.26) which could be remedied while young planners are still at university. By introducing an informal, group-based discussion component to PhD studies, it may be possible to incorporate a new method of preparation for ethical research which will assist PhD students when they are in the field and analysing data. Open discussions introducing students to a range of topics, such as: theory of moral philosophy, standard ethical topics (research misconduct, conflicts of interests, authorship, etc) and case studies of ethical issues which occur specifically in the planning profession, will encourage the circulation of ideas between faculty and students, and the development of students' cognitive abilities to identify ethical matters and how best to go about resolving them. This will enable students to actively participate in their own learning of ethical *behaviour* as opposed to simply rote learning formulae for correct ethical procedure, and in due course break the apparent silence in ethical discussions when in the workforce.

Additionally, supervisors have an important role in developing ethical sensitivity in researchers and therefore should become an essential part of their training (Thomas 2009). A series of semi-structured (non-credit) workshops made available to a PhD cohort can potentially be an arena for open debate where discussions of ethical values can take place, enabling students to identify problems and dilemmas while also recognising that there is much "ambiguity and pluralism" (Crotty 2006, p. 57). Engaging dialogue with supervisors and fellow students in an informal setting allows students to develop a sense of collegiality and develops their sense of ownership over both the process and outcomes of their research (Wisker et al, 2007). When students and teachers feel they are engaged in a common endeavour, this collegial atmosphere "provides a context which can help keep us sensitised to ethical considerations of our work" (Thomas 2009, p. 37), creating a community of practice where the participants are all concerned with the maintenance and perpetuation of the same ethical standards and rigour in methodology. Pritchard (2005) is an advocate of group consultations for the addressing of problems in research ethics. Pritchard believes that researchers often need assistance and support of others to identify ethical issues and to strategise constructive alternative ways to solve them. It is only through active reflection with others, he contends, that a students' practical ability to handle ethical challenges is enhanced (Pritchard 2005, p. 369).

This section presents a platform for how a PhD ethics forum might function.

- A group discussion format for ethics training for PhD's should include a facilitator to ensure that a comprehensive review of major themes is addressed. This role could be shared amongst supervisors or a separate position created.
- Learning ethical behaviour is a continuing process and discussion groups should be held regularly to assist the development and growth of student's moral compasses.
- Students could be required to review case studies and to work through them throughout the duration of the course. These case studies could entail both specific planning issues as well as interdisciplinary concepts. The cases would be discussed from all levels of subjectivity, including cultural background, religion, gender, age, disabilities etc. Cases could also be drawn from both an international and local lens, including the bringing of experts from the field in to discuss a specific example and its associated ethical issues (Tysinger et al 1997). These exercises would be challenging and would require trust, honesty, respect for others, transparency for others, and rigour in practice. It would be invaluable to everyone involved, pushing their personal boundaries about their limits as planners and academic researchers.
- Instructing students in ethical research and the functioning of ethics committees, so that they could better understand the procedural side of ethical behaviour, and in turn perhaps see the gaps between this and ethics in practice (Folse 1991).
- Provide training on ethics in teaching, as ultimately this is where ethical behaviour must stem from- as Folse states "a faculty member cannot teach sound research ethics while engaging in unethical teaching practices" (Folse 1991, p. 346).
- Ultimately, promoting a sense of community by working together through shared goals and resources in order to arrive at a common understanding of what it is to be an ethical researcher in the professional planning field (Folse 1991).

Conclusion

"Ethics is a personal condition, it is impossible to say or to impose how to be ethically correct" (Mello 2009, p. 102). It is evident that there is a gap in the literature about ethics training for PhD planning students and an apparent need for advancing the discussion of ethics in planning research. A few questions that might begin the discussion are: Do ethics as practice begin in the classroom at an undergraduate level? Does it require lecturers trained and well-versed in the philosophy of morals? How do professional planning associations, the academic community and researchers define what ethics in planning means?

Future research into the scholarship of ethics and ethical training for planners might explore such areas as: ethical dilemmas in the workplace, to planning ethics course from theory as Kaufman and Howe introduced in the 1980's. Martin and Beatley's (1993) work on how planning curriculum is currently contributing to the understanding and fostering of new ethical relationships could also be developed further- more specifically, the fundamental basis of humanity's relationship with, and moral obligations to, the earth community. They state that "environmental ethics is the basis for planning for a sustainable earth community" (p. 118). They deduced a number of implications for planning curricula: "the need for planning programmes to incorporate the topics of environmental ethics and sustainability more explicitly into much of their curricula" (p. 124). Likewise, Cook and Sarkissian's (2000) work on the importance of incorporating environmental concerns into all ethical training raises many interesting ideas on the importance of avoiding 'subcontracting' of ethical concerns in the planning profession. Their valuable contribution to the body of research on ethical training in Australia demonstrates the need for a holistic approach to ethics training which does not focus purely in professional concerns but advocates the unifying of personal and professional values in the planning profession. And the pertinent question of being ethical with on-line research, which will only

become more of a concern as universities and professions increasingly rely on web-based technologies.

This paper has attempted to illustrate that it is equally important in both the procedural elements of PhD research and the practical face-to-face components of research to be ethically sound. While there is most likely a clearer understanding of procedural ethics amongst PhD cohorts in that they follow the correct protocol in their methodology of applying to ethics committees, in their understanding of the importance of originality and avoidance of plagiarism, in their dealings with their supervisors, and in their rigour when researching, there may be a deficiency when researchers are in the field in terms of their understanding of ethical behaviour in the planning context.

Procedural and practice ethics are not mutually exclusive, but linked. Perhaps then it is necessary to formulate a series of discussion panels which impart not rules for standard ethical behaviour, but broad principles which could be used to assist student researchers when they encounter difficulties. Foremost for supervisors should be the desire to impart the fundamental purposes of academic research and the rationale behind the pursuit of knowledge for its own sake and not the advancement of individual ambitions. Folse (1991, p. 349) believes that it is an obligation of graduate programmes to "provide a forum for discussing ethical issues" in order to avoid "an environment where colleagues or students are afraid to address questionable practices in teaching or research" as this will only work to the detriment of the discipline rather than contributing to the development of knowledge. As stated by the PIA, "ultimately, the integrity of planning decisions, and of the planning system as a whole, relies upon the integrity of the planners who serve it, in whatever capacity" (PIA Code of Professional Conduct).

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Planning Education to Advance Children's 'Right to the City'

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Abstract

How can planners learn how to consider children as citizens with 'rights to the city'? In Australia and New Zealand, a growing research and policy literature has begun to focus on the concept of Child-Friendly Cities, but there are still barriers to including children's voices in planning effectively. There are also policy and educational opportunities that may allow a meaningful articulation of children's needs and ideas into local planning. Two recent research projects are used as case studies: the impact of Child-Friendly Cities in five local governments in Victoria (Whitzman et al, 2009) and children's perspectives on high-rise living in central Melbourne (Whitzman & Mizrachi, 2009). Enablers include: the growth of an international Child-Friendly Cities movement that supports a children's rights approach; a growing concern about the impacts of severely limited independent exploration of children; and a critical mass of researchers and practitioners in Australia and New Zealand who are working to advance children's rights in planning. Barriers include: capacity gaps amongst planners in consulting with children and adults; inadequate tools to include health and social equity issues within current land use planning policies; and a general sense amongst spatial planners of 'policy overload' and uncertainty. Extending from this research, this paper advises how reviewing competencies, knowledge, and skills would evolve planning education and advance professional practice toward developing better cities that are also child-friendly. We conclude that creating stand-alone child-friendly teaching subjects are inadequate. Instead a healthier outcome will result from integrating increasingly rich evidence and techniques within existing planning education and professional development programmes.

Introduction: Planning education for a child-friendly city

In Australia and New Zealand, a growing critical and policy literature offers a wealth of local educational resources for advancing children's rights to the city. Over the last decade, the notion of children's rights to travel, explore and enjoy cities has been richly informed by a number of researchers and educators, particularly Claire Freeman and colleagues (Freeman et al 2006, 2003, 1999; Freeman & Aitken-Rose, 2005), Geoff Woolcock & Brendan Gleeson (2007), Paul Tranter and Karen Malone (Tranter & Sharpe 2008; Tranter & Malone, 2003; Malone, 1999), and Ruth Fincher and Kurt Iveson (2008). Collectively, they have expressed a vision of planning for Child-Friendly Cities, strongly grounded in a focus on the rights of the child.

According to the UN Convention on the Rights of the Child, children have the right to express their views in matters that affect them (Article 12), to have their best interests taken as a primary consideration (Article 3), to be supported in their physical and emotional development (Article 6), and to participate freely in 'appropriate and equal opportunities for cultural, artistic, recreational and leisure activity' (Article 31) (UNICEF, 1989). The UN sponsors a Child Friendly Cities (CFC) Initiative working with local governments around the world to support children's rights, including the right to 'influence decisions about their city', 'walk safely on the streets on their own', and 'participate in family, community, and social life' (UNICEF, 2010).

In terms of spatial planning, this vision of a 'Child-Friendly City' shares at least three common aspects. First, hearing children's voices involves planners creatively consulting with children to discover their likes and dislikes about local environments, the way they currently use their communities, and their ideas for improvement. Second, planners must be able to act on this advice by feeding children's ideas into planning schemes and design improvements: from

municipal strategic planning statements to local designs for new community facilities. Third, monitoring and evaluation of initiatives to improve public space must include the question of whether more children are able to access these community facilities autonomously – in other words, whether they are allowed by parents to go to schools, parks, shops, friends' houses and other destinations independent of adult supervision, whether they can play on the streets and in other public spaces freely, and whether, in short, they are treated not just as 'future citizens' but as 'current citizens' with rights (Simpson, 1997, pp. 908-909).

This vision of a child-friendly city is complementary to many goals of sustainable development and healthy communities: intergenerational equity, wellbeing, walkability/mobility, and liveability for example. I would argue, following Tranter & Sharpe (2007), thinking about children in cities is an excellent way to re-conceptualize planning for sustainable cities. Children are canaries in urban coal mines. At least until the age of 17, they cannot drive cars, and so are dependent on sustainable transport: walking, cycling and public transportation. The quality and accessibility of local streets and destinations is particularly important to them. However, this conceptualization of children is not enough, focusing as it does on their vulnerabilities instead of their capacities as social actors. Children can be 'open to new worlds and new possibilities, and because of this, they may have a vital role to play in generating innovative solutions' (Tranter & Sharpe, 2007, p. 306). Children are the decision-makers of tomorrow. If cities are unhealthy for children, they may grow up to be fearful and unhealthy adults. Conversely, if cities are made more accessible and welcoming to children, all people presently living in cities would benefit from these improvements.

The main question asked by this paper -How can planners learn how to consider children as citizens with 'rights to the city' – thus expands into larger questions of planning education and practice. How do we educate the planners of tomorrow in skills and knowledge that can capture the imagination and ideas of all citizens, not only children? How can we move from fundamental understanding of children's rights, as a subset of all people's rights, to the implications of these rights for collaborative governance? How can we implement new policies and plans that are informed by all ages, as well as a socio-economic range, of citizens? How can we collectively reflect as practitioners to celebrate good practice and tackle remaining challenges? We explore these questions of education and practice through two recent research projects: the impact of Child-Friendly Cities in five local governments in Victoria (Whitzman et al, 2009) and children's perspectives on high-rise living in central Melbourne (Whitzman & Mizrachi, 2009).

The state of children in cities: confined, dependent, unhealthy

While the Child-Friendly Cities movement has developed a positive vision of children's rights, the impetus for recent activism has been the alarming decline in children's everyday physical activity in little more than a generation (Malone, 2007; Tranter & Pawson, 2001). The most common measure of the closely associated factors of children's active travel and independent mobility is the journey to school. In Melbourne in 1970, 55.3 percent of young people walked to school or higher education; this figure fell to 22.2 percent in 1994. In the same time period, car travel to school increased from 14.3 percent to 43.9 percent (Garrard, 2009, p. 9). Similar declines have been noted in the UK (Hillman et al, 1990), New Zealand (Tranter & Pawson, 2001), Canada (O'Brien et al, 2003) and the US (McMillan, 2005). As is the case for adults and the journey to work, journey to school represents only about one fifth of trips (Mackett, 2004). From 1994 to 1999, children aged 0-14 years in Melbourne made an average of 23.1 trips per week, 16.3 of which were as a car passenger (71 percent), 5.0 as a pedestrian (22 percent), and 0.2 as a cyclist

(1 percent). During this five year period, Melbourne children spent on average four hours a week as a car passenger and 48 minutes walking (Ironmonger & Norman, 2007, unpaginated conference paper). Children's independent exploration in their neighbourhoods, parks, and wilderness areas has also been curtailed, although non-travel behaviour is the subject of little quantitative research (but see Gill, 2007; Malone, 2007; Louv 2006). This trend is much more extreme in Anglo-American high income countries, with Japan and Finland being two examples of societies where children as young as five and six being able to travel autonomously (Malone, 2007; Kyttä, 2004).

Children – and adults – need not be in every place at all hours of the day and night in order to have rights to the city. Neither should all children be considered as one 'entity' from birth to 18. But the 'right to the city' much debated in seminal texts for adults is a fight for access to public space, which is essential for individual health as well as collective empowerment (Lefebvre, 1996; Mitchell, 2003). Similarly for children, the 'freedom to explore the local neighbourhood is probably the key ingredient in children developing a sense that they belong to a neighbourhood, a place' (Engwicht, 1992, p. 39). Children's right to the city is constrained by portraying younger children as innocent 'angels', needing protection from life's evils to the extent of 'containment' (Malone & Hasluck, 2002, p. 25), while older youth are often portrayed by the media as 'devils' (Valentine, 1996, p. 581). Whether fearful for younger or fearful of older children, the net result is to marginalize both in the public realm.

One of the most publicized impacts of children's decreasing use of public space is increasing obesity. One in four Australian children aged 5-17 are overweight or obese, and cross-country comparative data indicate an inverse relationship between child obesity and active travel rates (Garrard, 2009, p. 6). Childhood obesity tracks into adult hood and contribute to chronic conditions such as cardiovascular disease, adult onset diabetes and colon cancer (Catford & Caterson, 2003, p. 577). Studies indicate that children who actively commute to school achieve recommended levels of daily activity, and that children who actively commute to school are more likely to actively commute to other neighbourhood destinations. Only one third of Australian children aged 9-16 years presently meet guidelines for minimum daily physical activity (Garrard, 2009, pp. 1-4). Studies in the UK suggest that active travel is a better source of regular physical activity than organized school sports (Mackett, 2004).

A recent UK study shows that parental time spent directly supervising children has increased fourfold from 1975 to 2005 (Gill, 2007, p. 13). In the US, mothers make the majority of trips escorting children, limiting work schedules and job opportunities (McMillan, 2005, p. 441). In Melbourne, 17 percent of the morning rush hour car traffic is associated with the school run (Department of Infrastructure Victoria, 2005), which may ironically increase danger in the immediate vicinity of the school. Approximately two third of pedestrian accidents in Victoria involving children occurred before and after school car pick-ups (Malone, 2007, p. 518). Because of idling cars, the air quality around schools can be worse than surrounding streets (Kingham & Ussher, 2007, p. 504), and the air inside cars usually has higher levels of pollutants than surrounding air outside the car (Tranter, 2004, p. 11). Driving children because of concerns for their individual safety and wellbeing has negative impacts on their families and their communities.

The Role of Planning in Creating Child-Unfriendly Cities

Why are there more cars than children in public space? The most commonly cited reason is child and parental fears of traffic safety (children getting hit by a car) and stranger danger (children getting abducted) (Hillman et al., 1990; Prezza et al 2005; Timperio et al, 2004). A more complex set of both physical and social factors is described by a number of researchers (Engwicht, 1992; Mackett, 2004; Malone, 2007). These include increasing car ownership and lessened public transport; working parents dropping off children at school along their car commute to work; increasing sprawl, with the decline of neighbourhood shopping centres, small schools, and sports clubs, and the rise of shopping and leisure activities only accessible by car; and middle class pressures to replace unstructured outdoor play with 'turbo-charged' combinations of private schooling, private sports and arts lessons, and expensive and exotic 'play dates'. Some of these factors are well beyond the purview of spatial planners as personal choices and activities are legacies of democratic and economic gains over generations and technological changes as well as social pressures. Nonetheless, the planner designing or regenerating place within strategic agendas enforces codes and controls on built form and movement through social and physical infrastructure.

There are at least three aspects of the built environment that are closely related to children and adult use of public space. The first is related to transportation planning, and has to do with the relatively priority given private motorized vehicles as compared to active transport options such as walking and cycling. At the societal level, countries with high levels of active transport generally have low pedestrian and cyclist fatality rates. The five high income countries considered 'top performers' for pedestrian safety (Sweden, the Netherlands, Finland, Germany, and Denmark) have implemented a comprehensive package of integrated traffic safety measures, including speed reduction measures such as 30 kph speed limits and signalized crossings in most areas, high levels of cycling infrastructure provision, and legislation that assumes driver responsibility in an accident involving child pedestrians (Garrard, 2009, pp. 5-6). There is consistent evidence that at the community level, controlling the amount and speed of traffic, decreasing block lengths, providing footpaths and separated bicycle lanes, and in some cases, closing off streets to through traffic, are all effective measures to increase active transport use (Gill, 2007; McMillan, 2005). These are the opposite measures to the traditional 'Radburn' approach, which stresses complete separation of vehicle and pedestrian access to promote unimpeded car traffic, including the use of isolated subways and footbridges (Clayden et al, 2006, p. 55).

The second set of features has to do with privileging access over mobility in spatial planning and design. Engwicht (1992, pp. 125-131) and Gehl (1987, p. 33), amongst others, have argued for relatively densely occupied neighbourhoods with hubs, a range of local goods and services, a mix of housing and job opportunities, and a strong sense of local identity and street life, including free and inexpensive places to linger, such as benches and cafes with outdoor seating. Gehl (1987, p. 118) has also called attention to the fact that playgrounds are primarily meeting spaces, while Mattson (2002, p. 44) points out that extreme separation of land uses typical of modernist planning extends to age segregation, with large sporting grounds containing car parking adding to sprawl. Kyttä (2004, p. 185) provides a long list of environmental 'affordances' that encourage children's exploration, including flat surfaces for cycling and skipping; adults to follow around; smooth slopes for skateboarding; fallen leaves and dirt allowing digging and building; tree limbs and poles to allow hanging or swinging; climbable objects like trees, and natural shelter that allow peace and quiet or playing 'home'. Ironically, many of these exciting elements in public space have been fenced off or otherwise eradicated out of fear of liability

(Gill, 2007; Louv, 2006), with commercial adventure playgrounds – again with huge parking lots – provided as an alternative.

The third aspect has as much to do with the process of planning as with its built environment results. Children are rarely asked what they like and dislike in public space, and even when asked, their answers rarely influence planning policy. For instance, one Melbourne study of 150 ten year olds, asked them to map and photograph neighbourhood attractions they could walk or cycle to. Common destinations included playgrounds and sports fields as well as less elaborate recreational possibilities such as a target painted on a wall. Food as a neighbourhood destination came up in 70 percent of responses, including fast food outlets and corner shops. Schools, shopping centres, and friend's houses also were drawn by significant numbers of children (Hume et al, 2005). A similar study in Sydney with 8-12 year olds found 'neighbourhoods good to walk in' had natural elements such as trees and flowers, playgrounds and less formal recreational areas, food-related and other retail shops, footpaths and good crossings, and plenty of 'eyes on the street' to combat stranger danger concerns (Romero, 2007). However, the traditional planning approach has been to achieve lower child pedestrian and cyclist injury rates 'largely by removing children from the traffic environment' (Garrard, 2009, p. 14), and indeed, from the public realm.

Planning for adults not children: the Case of High Rise Housing

'Vertical Living Kids' is a research project which ran from July 2008 to December 2009, funded by the Victorian Health Promotion Foundation (Whitzman & Mizrachi, 2009). The research had two objectives: to explore the built and social environmental determinants of children's independent mobility (CIM) in central Melbourne high rise housing, and to uncover international best practice in planning policy for these communities. Forty children and their parents (18 living in public housing and 22 in privately owned housing), aged 8-12 and all in grades 4-6 of primary school, participated. We used a range of qualitative and quantitative techniques, including children being provided with a disposable camera for a week and then creating an annotated collage of their pictures; a travel activity diary filled out by children; a parental survey; and a desk-top policy review.

We embarked on this research because the concept of children growing up in high rise housing is still treated as something abnormal in the Australian context. This is despite widespread high rise public housing constructed in the 1960s, private market apartments being promoted as part of urban intensification from the 1980s onwards, and the fact that children routinely live in high rise environments in many cities in the world, including London, New York, Singapore, and Hong Kong (Costello, 2005). Partly, the issue was that high rise housing was conflated with social issues in public housing; with the high rise form itself 'considered to be 'alien' to the architectural and housing preferences of the Australian urban citizenry' (Jamieson & Jacobs, 1996, p. 78). As a result, both developers and planners involved in the massive redevelopment of Melbourne's waterfront and central business district in the 1980s and 1990s assumed that new residential towers would be populated by childless households, and accordingly designed and advertised them as family free zones, without sufficient community services, facilities and open space for families (Costello, 2005; Fincher, 2004, 2007; Randolph, 2006).

However, families with children are found in these new central city flats. In 2001, 20 percent of the population in high-rise units across Australia were living as a family containing children (Australian Bureau of Statistics, 2004, p. 169). In 2006, parents with children below the age of

12 comprised 7 percent, 5 percent and 9 percent of households residing in Dockland, Melbourne Central Business District, and Southbank respectively (City of Melbourne 2008a, Appendix 2). By 2021, children aged 14 and below will comprise 7.7 percent of the total population of these areas, equating to just over 4,000 people (City of Melbourne 2008a, Appendix 19).

One of the few Australian studies to compare children's experiences in both public and private high rise flats, conducted by Ross King and colleagues in Sydney (King, 1974), found significant differences between the two samples. Children residing in public housing generally played with friends living in the same block and had more independent mobility within smaller ranges. Children residing in private high rise housing generally engaged in more home-based activities and structured activities, but also had a greater range in terms of distances travelled. The children in private housing generally responded to nearby facilities more positively, although child densities were greater in public housing (King, 1974). In short, 'apartment children do not live in a vacuum' but are 'embedded in more encompassing social, cultural, and spatial systems that may alleviate or exacerbate any effects which may occur' as the result of the high rise design (van Vliet, 1983, p. 227).

Our research, undertaken 35 years later, largely mirrored the results of the 1974 King study. Children in public high rise housing experienced relatively high levels of independent mobility: 62 percent of their journeys were undertaken either alone or with other children, while only 17 percent of trips taken by the private high rise sample were undertaken without adult accompaniment. The 'geographies' of children in public housing was dominated by local, designated play spaces and school yards that were perceived as unsatisfactory by the children. For instance, one 11 year old boy said he didn't like the park on his estate because:

> 'It is boring and there is nothing to do. It is for little kids. Most of the things in the playground are broken'.

Despite their limitations, the play areas were seen as good social spaces for children, as one 10 year old boy pointed out:

> 'People of my age go there. No parents. It makes it fun'.

In contrast, children in privately owned housing not only explored throughout a greater territorial range but a used a wider variety of spaces: downtown shops and other leisure activities as well as schools travelled to by public transport (Whitzman & Mizrachi, 2009, pp. 3, 42-47). Only eight children living in public housing, or 44 percent of the sample, described commercial spaces, mostly local shops such as milk bars. In contrast, 18 of the private housing children, comprising 88 percent of the sample, identified commercial spaces they liked in the photo collages, including major downtown shopping centres, Federation Square and the Southbank promenade. One nine year old girl in privately owned housing said:

> 'I like how we live down the road from the shops because me and my friend can go down and get dinner when we are ready'.

An 11 year old boy said:

> 'I love the trams because they take me where I want to go.'

Unfortunately, several children in privately owned housing complained about restrictions on their play, such as the 11 year old girl who said:

> 'I don't usually go down to the courtyard because people don't like it when you play games and be loud. And there aren't many kids in the building' (Whitzman & Mizrachi, 2009, pp. 45-47).

The Cities of Melbourne and Port Phillip contributed considerable staff in-kind resources and have resolved to follow up on the findings of the research as part of their Child-Friendly Cities initiative. The State government Office of Housing, responsible for public housing adjacent to the central business district, were also involved in the advisory committee for this research and plan to use the findings to inform their revitalization strategies.

However, the reactive approach now being taken in Victoria can be contrasted with Singapore, where high rise housing (mostly publicly owned) has a range of apartment sizes in each building, and planning policy enforces a range of play spaces and services that support families. For instance, every block of buildings is expected to have a small market and/or a coffee shop in the ground floor or within a short walk. Many blocks have ground level void decks, equipped with benches, tables, and bicycle ranks. Childcare facilities, games courts, and/or children's playgrounds are also expected for every group of three to four buildings, and are linked by footpaths to schools and neighbourhood centres (Yuen, 1995). In Vancouver, similar downtown residential intensification to Melbourne was supported by *High Density Housing for Families with Children Guidelines*, which mandated maximum walking distances to primary schools, day care centres, after school care facilities, community centres, grocery shopping, and public transport. It also mandated minimum number of family units in housing, and emphasized opportunities for natural surveillance of communal play spaces from units (City of Vancouver, 1992).

Institutional barriers and enablers to realizing children's rights to independent exploration in 'Child-Friendly Cities'

'Institutional Barriers and Enablers to Children's Independent Mobility' was a four year research project (2006-2009) funded by the Volvo Research and Education Foundation, through the Australasian Centre for the Governance and Management (GAMUT). In the first phase of research, we reviewed the international literature for policies and programs which have been hypothesized to affect CIM either directly or indirectly, then examined the Victorian policy framework to see the extent to which CIM was addressed (Whitzman & Pike, 2007). With the exception of some local governments' Child-Friendly Cities policies, there was no explicit consideration of CIM, although several policies and programs – including Neighbourhood Renewal, Bicycle to School programs, and Safe Routes to School – might indirectly have an impact on rates of children's independent exploration (a relationship that has not yet been evaluated). In the second phase of the research, we dug deeper into the question of how Child-Friendly Cities, with their emphases on children's right to participate and their right to walk alone on safe streets, were influencing spatial planning policies and practices in Victoria (Whitzman et al., 2009). We asked the research question: 'How do Child-Friendly Cities promote Children's Independent Mobility'? We answered this question using three methods. First, we undertook an international literature review of Child-Friendly City initiatives, with a particular focus on any policies or programs that aimed to improve active travel or independent mobility. Second, we analysed current policy documents in seven local governments (five with CFC initiatives, two without), to see if policies promoting CIM have resulted from consulting with

children. Third, we interviewed local government planners (both health and social planners and land use planners) to ascertain whether there was an increased understanding of CIM have resulted from CFC initiatives.

The first finding to emphasize is that all of the local government initiatives we explored were still in their developmental stage. The City of Greater Bendigo is the first city in Australia to be recognized by UNICEF for its CFC activity, and that was only in 2007 (City of Greater Bendigo, 2009a). One of the three local governments we initially approached as a 'control' site – Ballarat – turned out to be in the initial stages of CFC development, and so was included as an 'intervention' site. We also found that at the international level, there are large gaps in the documentation of initiatives, and evaluation is still very limited. For instance, in the City of Pistoia Italy, a major campaign was implemented with and for children starting in 2003. The campaign sought to improve road traffic and improve environmental conditions on its streets. Safe routes to school were signposted by yellow bears (the logo of the initiative) painted on the sidewalks, and a square being used as a car park near one of the primary schools being reclaimed as a public space with new plantings and the banning of cars. A marked increase in the number of children walking to schools has been claimed as a result, although exact statistics are not known (Corsi, 2002). CFC websites have recently been revamped to improve access to researchers and practitioners (Child-Friendly Asia-Pacific Network, 2010; UNICEF, 2010).

In terms of our policy analysis, we found that the councils with CFC initiatives were more likely to recognize children as a specific group with rights in Council Plans and Health Plans, were more likely to have formalized mechanisms for children and youth participation in decision-making, and to support children's right to play through specific policies and programs. For instance, the City of Melbourne's *Municipal Public Health Plan* (recently amended and incorporated into the Council Plan) states that Council will 'develop procedures across council to engage children as legitimate stakeholders in the policy development cycle of councils' (City of Melbourne, 2005, p. 29), while the City of Port Philip has pledged to 'develop an Impact on Children Assessment Tool and guidelines for use when establishing policy and services' (City of Port Phillip, 2005, p. 1). However, the City of Melbourne's recent *Future Melbourne* 10 year strategic council plan involved extensive consultations with 1600 people, including focus groups with young people 15 to 25 and one primary school, but there was no specific outreach to the growing number of child residents (City of Melbourne 2009). The City of Greater Bendigo's new *Play Space Strategy* provides an inclusive definition of play, whose aim is to 'provide a broad range of high quality play opportunities and experiences and can be enjoyed by the whole community, regardless of age or ability' (City of Greater Bendigo 2009b: 15).

Even in the five CFC councils, there was virtually no mention of 'children', let alone any recognition of them as a population group with specific rights or needs, in Municipal Strategic Statements (MSS). This is problematic, because the MSS has a strong legal standing, particularly when development decisions are appealed to the Victorian Civil and Administrative Tribunal, and is also the Council policy that most directly has an impact on the physical environment. For example, the City of Brimbank's MSS has only three mentions of 'children', all in the context of childcare centres (City of Brimbank, 2006). The one partial exception is Melbourne's MSS, which promotes a Youth Precinct adjacent to a skate park on the north bank of the Yarra River (City of Melbourne 2008b, clause 21.05). The monitoring and evaluation systems of the councils were also weak, and varied greatly between councils.

The City of Greater Bendigo's *Health and Wellbeing Plan* (2008) has an indicator 'new activities and programs designed to build social and emotional resilience' being created for children aged

8 to 12, but impact, number of children, and even definition of how resilience will be measured is not supplied.

The City of Ballarat's overarching 25 year strategic plan, *Blueprint Ballarat*, and its *Health and Wellbeing Plan* (2007a and b) both list resources, timelines, lead council business unit, and partnerships for recommendations, but the recommendations do not include 'increased autonomous use and comfort in public spaces' for children, which might be an excellent indicator for this work.

Similarly, the interviews with spatial planners in these councils suggested that while several have undertaken 'whole of council' training on Child Friendly Cities, the skill set for consulting with children and responding to their concerns through policy remains underdeveloped. The City of Melbourne staff we spoke to freely acknowledged the limits of the *Future Melbourne* consultations, and has budgeted training on skilling up staff to consult with children for 2010. However, the majority of both land use and social/health planners cited insufficient time and monetary resources as barriers to consultation, and scepticism by senior council officers and councillors about participatory processes involving children as barriers to inclusion of their recommendations in neighbourhood structure plans and other spatial planning and design policies.

Discussion: Towards child-friendly planning education

The two research projects used different methodologies: in Vertical Living Kids we focused on the opinions of children and their parents, while the GAMUT research involved talking to local government planners and analysing plans. Despite the slightly different methods and foci, these two research projects suggest common enablers to Child-Friendly Cities. First, increased concern about child unfriendly cities, as exemplified in the precipitous decline in children's independent mobility, has led to increased policy interest in the issue. Second, there is a nascent international Child-Friendly Cities movement, informed by an understanding of children's rights, which has taken off to some extent in Victoria and throughout Australia and New Zealand local governments. Third, we appear to be approaching a critical mass of planning researchers who are exploring how these concerns and research can feed into education and practice. Examples of good planning practice exist, such as the City of Vancouver's *High Density Housing for Families with Children Guidelines* and the City of Greater Bendigo's new *Play Space Strategy.*

The research also suggests barriers to success. These include: capacity gaps within planners (both land use planners and social planners) in terms of consulting with children, the absence of simple 'tools' such as phrases to insert in strategic plans, guidelines to use when reviewing new developments, and monitoring and evaluation techniques. The notion of Child-Friendly Cities is still new, and some more senior staff appear sceptical about participatory processes in general, let alone those involving children. And spatial planning is still conceived as rules-based reaction to development proposals, with a set of concerns (not only those regarding children, but sustainable transport, healthy communities, social equity) uncomfortably grafted on to the 'real business' of spatial planning.

How then can we engender skills and hope amongst the newest generation of planners, through both university education and professional development? Certainly, the aspects of planning which most affect children's ability to explore cities on their own – planning for cars not pedestrians, privileging mobility over access, and ignoring people's opinions about where they

live – are common concerns in terms of education for sustainability, healthy communities, or social equity. The real question is how to move from a generalized commitment to walkability, access to goods, and community consultation, to specific planning processes, codes, and indicators to progress these aims.

Concerns about the ability of Australian planning education to meet the challenges of the 21st century has led to a review of accreditation requirements by PIA (Planning Institute of Australia, 2009), a recent conference on The Future of Australian Planning Education (Rofe & Hamnett, 2009), and work by other Australian academics (Gurran et al, 2008; March et al, forthcoming). March et al (forthcoming, p. 5) provide a way to develop planning education. They separate 'declarative knowledge' ('knowing about things and being able to declare these back in various ways') from 'functioning or procedural knowledge' ('based upon the performance of tasks, building upon declarative knowledge'). They suggest that it is the latter skill that exemplifies being a planning professional, and that current accreditation criteria do not test functioning knowledge as well as declarative knowledge.

What would functioning knowledge look like in terms of planning education to support children's rights to the city? Teaching about a human rights basis to planning, while vital, is merely part of a declarative knowledge base to planning. Student and young planners also require functional skills in consultation outside the norms of public meetings and handling complaints about planning permits. Although there are ethics complexities in directly interviewing children, they can receive skills in using focus groups, 'weeks with a camera', design charettes, and other techniques to engage less commonly consulted communities. They can certainly work with schools and other community organizations on how their needs and ideas for better and more sustainable communities can be met through current and future planning policies. They can learn about local governance processes that transform communities. They can practice developing planning code that respond to these forms of consultation and express a positive vision of community change as part of strategic plan making. They can help develop and monitor community indicators. They can develop skills in analysing planning policies, and adapting good practices from elsewhere to planning law here. All of these skills and practices help people become better planners, full stop. They are also what planners need to learn in order to respond advance children's – and everyone's – rights to the city.

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ABSTRACT PAPERS

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Planning for the new millennium: students in serendip
Trevor Budge and Andrew Butt, La Trobe University

Students and educators in planning programs face new agendas this millennium; one of these is the prospect that by choice or necessity they will work in developing countries at some stage in their careers. Developing students and educating them for work and practice in new overseas environments, where the planning system and the priorities for society are considerably different to their Australian (or New Zealand) context presents opportunities and challenges. In early 2010 the La Trobe University Community Planning and Development Program took 13 undergraduate and postgraduate students to Sri Lanka or *Serendip* - its ancient name by which it is sometimes known as it is sometimes known. The students worked on a regional planning project with Sri Lankan planners, planning students at Moratuwa University and Australian planners who were working with the Planning institute of Australia post-tsunami project. This paper reports on what the students did, what they learnt, what was the impact on them and what the La Trobe program learnt about preparing students to work in new environments.

Indigenous engagement in planning processes: Lessons and challenges for planning education
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Many contemporary land use and natural resource management planning initiatives have embraced a values-led planning approach. At the same time, there have been increasing calls to recognise and respect culturally diverse values in public policy (European Landscape Convention and the United Nations *Guidelines on Indigenous Peoples' Issues* (UNFPII 2008)). Although indigenous consultation in many land use planning and natural resource management initiatives has been undertaken throughout Australia, indigenous input (with a few exceptions) is seldom visible in the project outputs. In most planning studies at local and regional scales, there has been a significant hiatus in incorporating indigenous landscape values.

This evidence strongly suggests that conventional approaches to indigenous community engagement in values-led planning processes needs to be revisited. At the same time however, a number of associated challenges will need to be addressed. For example, wide concerns have been expressed that indigenous knowledge and values are seemingly "incompatible" with contemporary European values, in terms of format and structure (Jones 2007; Lane 2006; Stephenson 2008).

Recent research has demonstrated that it is possible to work with indigenous communities, comprised of both traditional and non-traditional owners, to identify indigenous landscape values of relevance in a rapidly urbanising planning region such as South East Queensland (Low Choy et al, 2009). This research is continuing into its second phase and whilst this paper represents the first evaluation and reflection of its research methodology, initial lessons learnt have highlighted some potential challenges for planning education.

This paper will outline the methodology adopted for indigenous engagement thus far and proposed for the ongoing research. Specifically, it will seek to examine the question for planning education: how should planning education respond to the challenges of exposing students to opportunities for indigenous community engagement in a largely European based planning process?

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Evidence from past futures
Jeremy Dawkins, University of Technology Sydney

There appears to be little current research aimed at comparing two conditions: the city as it is, and the city as it might have been if specific planning interventions had been, or had not been, carried out. No doubt, the absence of a discourse around these questions reflects the complexities of values, causation and measurement. No doubt, also, it tells us much about the nature of planning practice and theory. Nevertheless, gathering post-implementation empirical evidence on which to construct arguments about the effects, and effectiveness/ineffectiveness, of planning interventions should be a priority for planning institutions, planning agencies and planning schools.

At its simplest, an assessment of past practice can suggest what works. It enables a planning agency to defend programs and mechanisms and to make a case for powers and resources. It provides researchers and students with cases, data and hypotheses. It offers answers to the question, What do planners do? Above all, evaluating past interventions – the challenge of distinguishing between what was and what might have been – can itself be a profound learning experience and contribution to planning theory.

The paper expands on and defends these propositions, and offers examples and models for post-implementation reflection on and measurement of planning interventions in Australia.

Creating active communities: A critical review of the available literature
Jon Kellett, Matthew W. Rofe, The University of South Australia

Open space is an important component of urban areas and claimed to be a key factor in promoting active living. However, emerging policies and design trends addressing open space may well be premised upon assumptions about its centrality to the promotion of active living as opposed to reliable evidence. Responding to this concern, this paper engages with the evidence base with respect to evaluating the importance of open and public space in supporting active living through a review of the academic and policy evidence. Commissioned by the Heart Foundation (South Australia) in early 2009, this research presents an exhaustive review of the current literature addressing types of open space, uses of space, location of spaces and design of space. The evolution of open space policy is also charted and common aspects such as open space hierarchies and open space standards are identified. It is clear that there is a long legacy of standards and approaches to the provision and design of open space, which is increasingly open to question. The evidence suggests that a diverse range of spaces are significant in promoting physical activity, but the literature tends to focus more on *active* than *passive* pursuits. The conclusions emphasise the importance of well designed open space which is part of an interconnected network to promote pedestrian and bicycle trips between open space.

Using peer review in group-based assignments: Insights and reflections from a recently established planning programme
Paul J. Maginn, The University of Western Australia

This paper critically reflects on the use of peer review by students and professional planners in group-based project assignments in two units, one a first year introductory planning unit; the other a fourth year/PG Diploma that form part of the recently established planning degrees at the University of Western Australia. Specifically, the paper examines two broad-ranging issues. First, it considers the nature, rationale and efficacy of using group-based assignment work in both units. In short, the overall pedagogical aim is to develop students' appreciation of the need to and complexities of working in small group contexts. Next, it examines the two peer review processes used, one that is student-based and used in both units and the other conducted by a small panel of professional planners that is used within the fourth year/PG Diploma unit. The ultimate aim of the peer review processes are to identify individual student contributions so that a corresponding individual mark/grade can be awarded. Ultimately, students deemed by their peers to have contributed the 'most' are rewarded with a higher grade/mark whilst the opposite applies to those assessed to have contributed relatively less.

The integration of research into planning education
Severine Mayere, Queensland University of Technology

The need to integrating contemporary research into planning education has been widely acknowledged by various planning institutes and associations in Australia and across the world.

Most of the discourse on planning education refers broadly to restructuring university courses to reflect a rapidly evolving social, economic, and environmental context. Specifically, there appears to be growing support for expanding the curriculum of traditional planning courses further to incorporate recent research findings that address the challenges to contemporary urban and regional planning. However, despite the seeming consensus on the issue, there is little in the way of concrete examples of how the integration of research and teaching is to operate in practice.

This paper investigates the approach being adopted for the integration of results of recently completed research into comparative approaches to urban growth in Australia into a final year planning unit. An analysis will be made of the appropriateness of educational theory as a guide to the integration of research results into teaching in a planning context, along with reflections on the process of adapting and developing materials based on complex research findings.

Planning Education Effectiveness study: Determining the relevance and effectiveness of University planning course to meet the needs of a modern planning system and students.
Garry Middle, Curtin University of Technology. Tim Perkins, Edith Cowan University Jennifer George, Macquarie University Paul Maginn, The University of Western Australia

At ANZAPS 2009, a paper was presented showing the results of an initial study into the effectiveness of the three planning courses, which involved a survey of current students. Students were asked to rate the importance of the various 'streams' of planning education, their passion for planning, and to identify what are the key attributes of an 'excellent' planner. this work has been followed up with additional surveys of, students in those same WA planning courses at the start of 2010, and a selection of practicing planners and non-planners working in or closely with the WA Planning system and also expands to begin to explore the views of planning students in Eastern Australia at Macquarie University. The results of these new surveys are presented and analysed, discussed against other recent result of various studies regarding preferred skills and capabilities of planners and the potential to expand this work throughout Australia is discussed.

Planning education and the role of theory in the new millennium: a new role for habitat theory?
Roy Montgomery, Lincoln University

Education for the planning profession often tends to focus on instrumental knowledge e.g., how to write or interpret planning documents or how to carry out technical assessments. To some extent what is being done is simply meeting market demand. Where theories or models are discussed these often revolve around decision-making practices used by democratic institutions at national and local levels. Thus it is not unusual for educators to contrast, say, the rational-comprehensive planning model with the deliberative democracy model. In the broader political context there is at the current time a greater expectation that private concerns will be responsible for the master planning of communities while planners work more at the edges in the vetting of plans and the management of public spaces. This paper suggests that in the light of ideological shifts in the past few decades away from master planning by governments and recognition of a greater pluralism in society notwithstanding a new theoretical "currency" is required that can engage the relevant stakeholders and affected parties. To this end a theory first developed in the 1970s, loosely known as "habitat theory" or "prospect-refuge-hazard" theory, is introduced or, more aptly, reintroduced, as a new starting point for planners working in the new millennium.

Planning's *relation* to climate change: Moving beyond *separateness* to the *mutuality* of *being*
Jason Prior, University of Technology Sydney

Among the most significant developments on the contemporary planning scene in recent years has been the emergence, investigation and expansion of the relation between *planning* and *climate change*. A broad range of prepositions have been used to indicate such relations, planning *about* climate change, planning *for* climate change, and planning *in* climate change being obvious examples. Simply put, these prepositions indicate a desire to *locate* planning in relation to climate change and vice versa. The use of such prepositions allows two things to be brought together while at the same time respecting their separateness. Given the above, the aim of this paper is to examine one form of relation that has been largely overlooked, namely that climate change *is* planning. This exploration moves beyond the attempt to locate two entities that can be understood as autonomous or separate, to an examination of the *mutuality* of the relationship between planning and climate change, mutuality here suggesting a sharing in common or a sharing between. The intention of this paper is thus to explore the many important mutualities between planning and climate change. In carrying out this exploration the paper has two purposes, one retrospective, one prospective. In respect of the former, it seems appropriate at this time to look back and reflect on the emergence of the mutualities between climate change and planning: What are their common roots? What are some of the key ideas, the influential papers, the seminal perspectives that have created a bridge between them? And what has opened them up to merger and fusion? In respect of the latter it is suggested that a clearer understanding of the emerging history of the mutuality between planning and climate change is helpful in shedding light on current controversies and in generating ideas about where the discipline of planning needs to go in terms of practice, of theory, and, not least, of education.

'Constructing' future professionals? Constructivist teaching and field based planning education.

Matthew W. Rofe, The University of South Australia
Lee Lik Meng, Universiti Sains Malaysia

Planning education serves two entwined agendas as it seeks to produce intellectually adept graduates who are also capable, emergent professionals. As planning is a 'real-world' endeavour it is desirable that planning education is imbedded in practical experience. Consequently, fieldwork is a staple teaching strategy within many planning programs. However, the scope and duration of fieldwork varies considerably. While much field work is of short duration, positioned as an augmentation to more traditional lecture-based teaching and learning practices, this paper asserts that much benefit for students and staff are to be found in immersive field-based courses. Such an approach is often entrenched in a constructivist teaching approach in which the field itself is the lecture theatre, where students are immersed for prolonged periods of time in collaborative research groups and actively positioned as central actors in the own learning and teaching. To illustrate the challenges and rewards of a constructivist approach, this paper presents a case study of an annual international field school coordinated by the authors. This field school brings together some 40 senior undergraduate and postgraduate planning students from the University of South Australia (UniSA) and Universiti Sains Malaysia (USM) to work in cross-cultural project groups in George Town, Malaysia. For staff and student alike, the challenges and opportunities afforded by this field school are intellectually stimulating, professionally demanding and personally enriching. This paper draws upon student journals and course feedback, as well as the reflections of course staff to assess the merits of immersive field schools generally and constructivist teaching approaches specifically.

Planning controls: An international comparison of Australia, England and America
Neil Sipe, Douglas Baker, Queensland University of Technology

The rationale for writing this paper is to gain a better understanding of Australia's planning system. It is generally assumed that Australia's system of planning controls is a blend of planning control philosophies from England and the United States. While there has been some comparative research on planning systems by Cullingworth (1993) who examined England, Canada and the United States and Booth (1996) who compared Europe, Hong Kong and the United States, there has not been any such research that compares Australia, England and the United States.

Because there is no Australian or U.S. planning "system", this paper will use Queensland as an Australian example and Florida as the American example. To understand planning controls across

these three jurisdictions, seven themes will be used, some of which were based on Cullingworth (1993) and Booth (1996). The seven themes are: demography, governance, property rights, role of the legal system, scope of planning, discretionary vs. regulatory; and certainty vs. flexibility. After having established the basis for Queensland's system of planning controls, we examine how these differences have shaped planning outcomes and in particular, the built form.

Integration of cross-cultural elements into planning education around negotiation and conflict resolution

Mellini Sloan, Queensland University of Technology

The Planning Institute of Australia, in its 2008 Planning Education Discussion Paper, proposes that further discussion is required around the question of whether we need to prepare our students for "international practice in the context of globalisation" (18). Arguably, even when our students, tomorrow's planning practitioners, work within Australia they will be interacting with more and more culturally diverse populations, particularly with increased population shifts in response to global climate change. Responsibility for preparing students for practice in such environments merits consideration of ways in which we can incorporate global perspectives on planning beyond adoption of international development units in our curricula. Given that understanding is central to agreement, it seems only rhetoric to question whether we need to incorporate cross-cultural perspectives on negotiation and conflict resolution into our existing curricula. This paper will argue further for the importance of cross-cultural perspectives in planning education, particularly with regard to praxis and practice of negotiation and conflict resolution, explore how widely such internalization is undertaken in planning schools in Australia, New Zealand and beyond, and offer information on best practices from both home and abroad.

After Copenhagen - Planning *in* climate change revisited

Wendy Steele and Brendan Gleeson, Griffith University

In 2009 the potential for an emergent conceptual framework - *Planning in Climate Change* - to work as a platform for evaluating the role of planning in relation to climate change was offered at the ANZAPS conference in Brisbane. This relational framework for action was comprised of three quite different institutional agendas: 1) planning **about** climate change; 2) planning **for** climate change; and 3) planning **in** climate change. In this paper we critically revisit the salience of this framework in 2010 in light of the outcomes of the United Nations Climate Change Conference in Copenhagen and the continued imperative of climate change. Ten key strategies that lie at the heart of the practical operationalisation of 'planning in climate change' are discussed with specific reference to planning education and training.

Planning with an aging degree or current 'Best Practice'

Richard Tomlinson, University of Melbourne

My first thesis is that students educated into the profession of planning will, over time, come to rely less on what they learned while studying planning and more on 'best practice'; or 'knowledge' that is 'generated', 'managed', 'shared' and constitutes a 'product', all 'based on policy that works'.

My second thesis is that this outcome is inevitable because employers and clients routinely call for knowledge of best practice in their job descriptions and in their tender documents.

My third thesis is that best practice is already, and will to an increasing extent, be defined by knowledge products found on the web. Further, that these products will often be found on the websites of institutions with a vested interested in the policy outcomes.

The difficulty with best practice is that it is mobile. Planning policies, practices and processes change over time as a result of experience, new political agendas, changing governance contexts and economic trends. How else is a planner to remain current but to turn to the Web? What does this mean for the teaching of planning?

Students should be educated in the use of the Web for planning purposes and should be encouraged to use and assess web-based searches and to formulate policies based on these searches. Two

case studies will be provided.

Planning for sustainability or 'taking the blue pill'.

Suzanne Vallance, Lincoln University

In the 1999 movie *The Matrix* Neo is offered a choice between a red pill (which will reveal to him the ugly truth of reality) or a blue pill (which will reconnect him to the illusory, and blissfully ignorant, world of the matrix). Here, I present something of a 'red pill' in the form of a summary of the growing critique of sustainability. Criticism ranges from long-standing debates over definitions, particularly with regards to the role of growth, to others that explore more fully the worldviews driving 'unsustainability' and how these might be changed. In so doing, sustainability is exposed as a highly political rather than an objective, scientific endeavour. The implications of a more sceptical evaluation of the concept are then explored.

Teaching planners law or lawyers teaching planning? – Some reflections on reality

Pippa Wallace, Waikato University Hamish G. Rennie, Lincoln University

Planning law is a key content requirement of professional planning programmes. Delivery of the subject offers particular challenges in determining declarative and performative knowledge choices, and differs from teaching law to lawyers. Achieving appropriate breadth and depth of subject matter and level of delivery is critical. These choices are influenced by the diverse backgrounds of students and lecturers, the broad ambit of potential professional application by students and the requirements of professional bodies. Furthermore, the dynamic nature of case law and legislation presents its own difficulties, as do the demands of academic and professional credibility. In this paper we reflect on our experience in teaching planning law, in the context of the redevelopment of our planning programmes necessitated by significant changes in legislation and the requirements of the New Zealand Planning Institute.

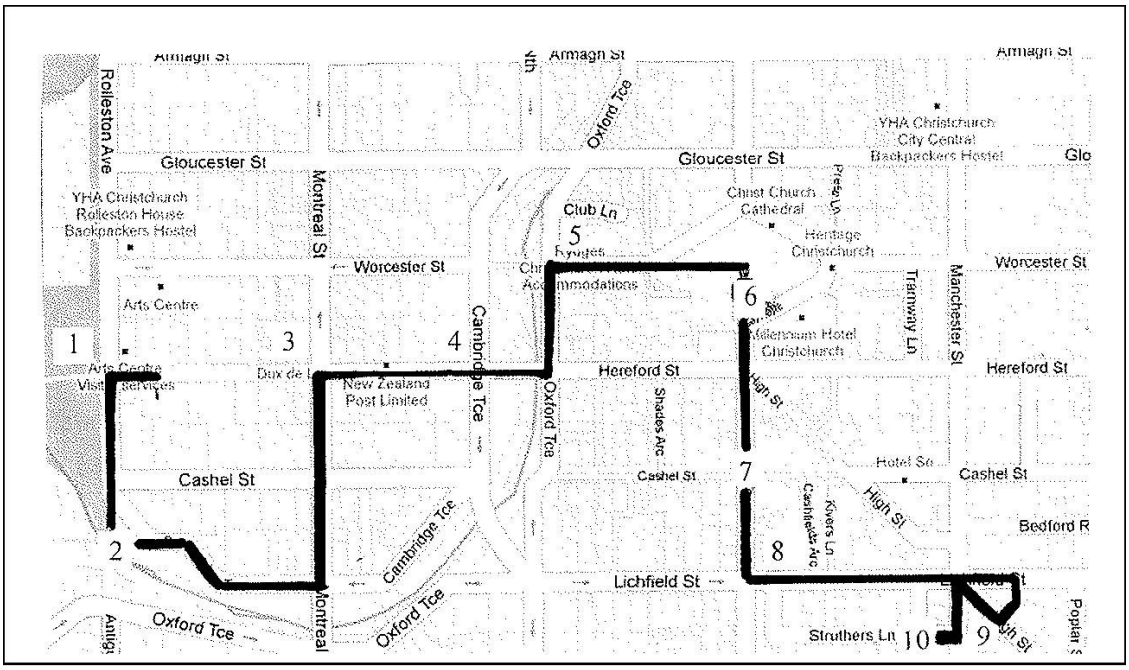
ANZAPS 2010 FIELD TRIP NOTES

Prepared by

Su Vallance,
Lincoln University

ANZAPS planning walk – April 18th 2010

Start: YMCA.



1 Botanic Gardens. Part of colonial Christchurch's attempts build a 'garden city', and to attract Anglicans of good standing, the botanic gardens are also home to the McDougall Art Gallery, the Christchurch Museum and, at night, a small number of homeless people. The brightly coloured Peacock Fountain is painted in 'Edwardian' colours. The so-called cultural precinct (extending from the park towards the Square) houses a curious blend of the spectacular, the banal, the old and the new.

2 Antigua walkbridge, boatsheds, hospital, Hagley Park. The 125 year old Antigua boatsheds are located on the edge of the Avon River, and were the site of an earlier row over traffic. In May 1964 the City Council approved a scheme to link Antigua Street and Rolleston Avenue by a traffic bridge over the Avon. Thanks to public opposition, the proposal was finally abandoned, and the area's quiet serenity maintained. Nonetheless, with the hospital, Hagley Park (notoriously busy on sporting Saturdays), Hagley High School, parking shortages and a network of one-way streets, traffic problems continue to plague the surrounding area. This stretch of the Avon was once an important Maori food gathering mahinga kai site. Nowadays feeding the ducks is a more popular pastime but bread is not the ideal food for these creatures. It not only gives them tummy trouble; their faeces are a major contributor to the poor health of both the city's rivers and the Avon-Heathcote Estuary Ihutai some miles downstream.

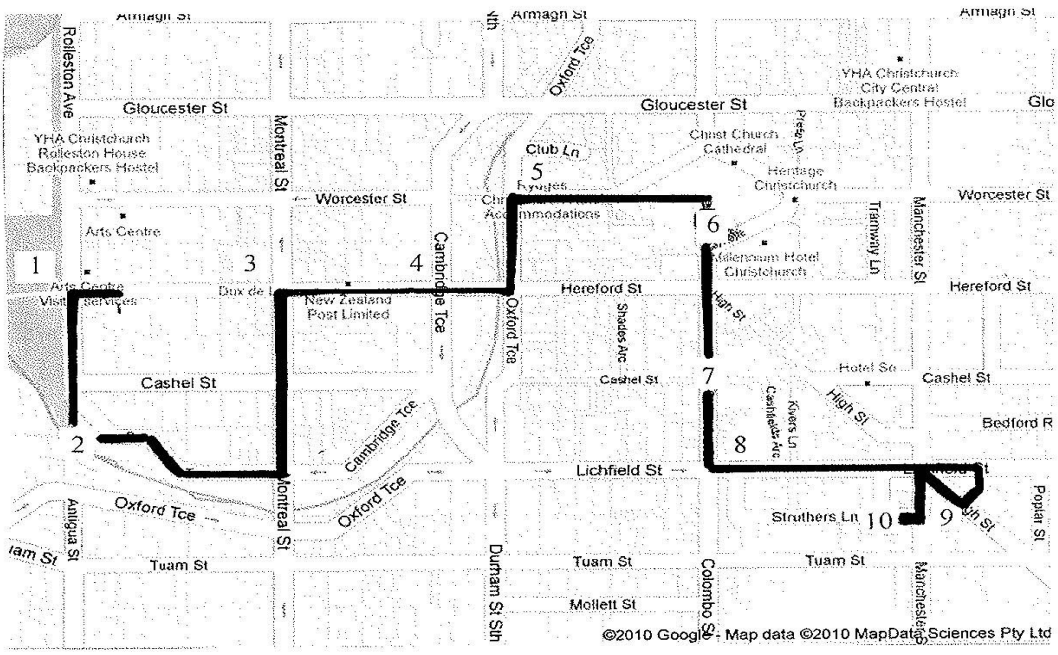
Hagley Park was named after Hagley Hall in Worcestershire and covers 161 hectares of sports fields, gardens, golf courses, duck ponds and walkways. According to a government decree of 1855 the park is "reserved forever as a public park, and shall be open for the recreation and enjoyment of the public."

3. Proposed conservatorium This is the controversial site of Canterbury University's proposed $24.3 million dollar music conservatorium/national music school. Proponents (including the Christchurch City Council which is prepared to borrow the money to build the conservatorium, then provide a long-term lease to Canterbury University) argue the development will 'save music', provide a strong sense of identity, and provide shelter for those drinking at the Dux de Lux. Opponents including the newly formed (by the Dux de Lux's owner) *Save Our Arts Centre* claim the building is not in keeping with neighbouring buildings, is too large for the site but too small for its purpose, and that the consultation process has laced transparency to the point of being 'sinister'.

4. Library chambers. Neo-gothic inspired former library chambers, built on an early Maori burial ground urupa.

5. Former Municipal chambers This Victorian building is now home to Our City O-Tautahi and used as a civic exhibition space. The Kate Shappard National Memorial is just to the north. Erected in 1993 it commemorates New Zealand becoming the first self-governing country to grant women the right to vote. The notion of democracy might be subject to new debate given the Government's recent decision to replace democratically *elected* regional councillors with *appointed* water commissioners.

This part of Oxford Terrace also marks the beginning of 'the Strip', arguably Christchurch's best known 'lunch, brunch and party' area.



6. The Square: The heart of the city? Dominated by the Christchurch Anglican Cathedral (completed in 1904), the Square occupies a somewhat ambiguous position in the hearts and minds of local residents. It has a strong history as a civic space, site of protest and celebration, yet today it caters strongly for tourists rather than locals.

The Square houses some interesting monuments and memorials, such as those commemorating the

First Four Ships that brought the first 792 of the 'Canterbury Pilgrims' to Lyttelton in 1850. Christchurch became a city by Royal Charter in 1856. You can climb the 36m high tower (+ another 27m of spire) for great views of the city (a small charge applies).

7. Cashel Mall

Described as an 'open air mall' and recently (2007) subject of debates about whether to remain pedestrian-friendly or convert it to a road in order to bring life back into the city. Letters to the local Press reveal mixed thoughts on the matter: Canterbury has one of the highest vehicle ownership rates in the world (700 cars/1000 people) and it is estimated that 70 per cent of Christchurch trips are in cars or vans (with 5 per cent made by public transport). A city-wide light rail network (favoured by the current Mayor, Bob Parker) has been mooted. Recent research funded by NZTA found 'most' people do not think their travel patterns will change in the next 10 years and that technological innovation will ensure the private car remains a viable form of transport. Nonetheless, an extensive renovation programme was completed in 2009, with repaving and general upgrading according to the 'principles of sustainability' which include:

- Use of local, long-lasting, low energy materials
- Increased trees and planting
- Use of permeable pavers to help manage storm water
- Re-use of materials removed from the current Mall
- Recycling stations
- Cycle racks.

We like cars p. A 10

Developing plans to bring life back to central Christchurch shouldn't require plans to be drawn up by overseas urban designers (Feb 20).

The first stage should be to lower the cost of parking in the city and to get the parking officers to pull their horns in. The biggest disincentive to going into the city is the cost of parking along with the parking Nazis.

Then get the cyclists off the main roads and onto their own cycleways separate from traffic. With this there wouldn't be any need for light rail as the roads would be freed up and the cyclists would be able to go their way at leisure.

Lastly, take our culture into consideration. We like cars and are going to use them. Any thinking has to take this into account. The idea that we are going to miraculously transform ourselves into inner-city pedestrians will just result in the inner city becoming a barren wasteland as no-one will go there.

Press Feb 22

KEN HORLOR
Beckenham

8. The Crossing Built in 2000 and owned by the Christchurch City Council, the purpose-built Crossing covers 3000m^2 with a floor area of 9500m^2. The Crossing has approximately 8.6 million bus passengers each year and 1850 buses/day (1050 off-street). The Crossing was designed to resemble and airport lounge so as to:

- improve the quality and image of public transport
- provide a safe, secure, sheltered comfortable place from which to catch a bus

- separate buses and pedestrian traffic
- provide ample visual and audible information to minimise uncertainty and waiting time for passengers.

Bus patronage has almost doubled since the Crossing was built (and it is estimated that the number of bus trips will rise to 25 million by 2015/2016) and there are plans for an extension; however the underground option is likely to cost over $112 million (with costs shared between the New Zealand Transport Agency and the Christchurch City Council).

9. Creative Industries on High? High Street is part of the Heritage Precinct, created in April 2002, that runs between Lichfield and Tuam Streets (otherwise known as Lichfield Lanes). The area has one of the most intact Victorian/Edwardian streetscapes in Christchurch, including the Majestic Theatre, ANZ Chambers, Rueben Blades, Excelsior Hotel, the High Street Para building, and the former High Street Post Office. In conjunction with the Heritage Trust, the City Council has attempted to retain its historic flavour by widening footpaths, removing overhead wiring, installing better lighting and planting trees. The fashion-conscious will note some famous names along this stretch of High Street. Another outcome of this restoration project has been the reforming of the High Street Business and Community Association.

10. SoL South of Lichfield, the 'hottest hospitality precinct' in the city, and part of the Council's revitalisation strategy. Formerly better known for its 'less endearing night-time economy', this area has seen heavy investment with a view to preserving its heritage and architecture, and giving it new life.

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Conference Programme

Saturday 17th April 2010

Session	Time	Authors	Paper Title
ANZAPS Convenes	1130	Ali Memon/ Hirini Matunga	
Indigenous and cross-cultural Planning Issues	1200 - 1215	Mellini Sloan	Integration of cross-cultural elements into planning education around negotiation and conflict resolution
	1215-1230	Darryl Low Choy, Jenny Wadsworth and Darren Burns	Indigenous engagement in planning processes: Lessons and challenges for planning education
	1230 - 1245	Trevor Budge and Andrew Butt	Planning for the new millennium: students in serendip
	1245 - 1300	Matthew W. Rofe & Lee Lik Meng	'Constructing' Future Professionals? Constructivist Teaching and Field Based Planning Education.
	1300-1320	Discussion	
Planning pedagogy I	1320-1335	Caryl Bosman	First Year Experience and Planning Studio Pedagogics
	1335-1350	Roy Montgomery	Planning education and the role of theory in the new millennium: a new role for habitat theory?
	1350 - 1405	Paul J. Maginn	Using Peer Review in Group-based Assignments: Insights and reflections from a recently established planning programme
	1405 - 1420	Discussion	
	1420-1440	Tea Break	
Planning Pedagogy II	1440-1500	Nicole Gurran & Peter Phibbs	Learning from the Australian Urban Land Use Planning Monitor
	1500 - 1515	Garry Middle, Tim Perkins, Jennifer George, Paul Maginn	Determining the relevance and effectiveness of University planning course to meet the needs of a modern planning system and students
	1530 - 1545	Christine Steinmetz	Ethics in PhD Planning Research
	1545 - 1600	Severine Mayere	The integration of research into planning education
	1600 - 1615	Discussion	
Beyond the planner	1615 - 1635	Neil Sipe & Douglas Baker	Planning Controls: An International Comparison of Australia, England and America
	1635 - 1650	Pippa Wallace & Hamish Rennie	Teaching Planners Law or Lawyers Teaching Planning? – Some reflections on reality
	1650 - 1705	Richard Tomlinson	Planning With an Aging Degree or Current 'Best Practice'
	1705 - 1720	Discussion	
	1900	Conference dinner – Dux de Lux Restaurant	

Sunday 18th April 2010

Session	Time	Authors	Paper Title
	0900 - 0915	John Minnery	Is collaboration adequate for implementation? Lessons for metropolitan regional planning from South East Queensland, Australia.
Urban Planning and Design	0915 - 0930	Steve Harfield	Urban design as social benefit: Thinking beyond formality and physicality
	0930 - 0945	Jon Kellett, Matthew W. Rofe	Creating Active Communities: A Critical Review of the Available Literature
	0945 - 1000		
	1000 - 1020	Discussion	
	1020 - 1050	Morning Tea	
Liveable Cities and Urban Planning	1050 - 1105	Awais Piracha	Collaborative City Liveability Study using Gehl Methodology: Pedestrian and Bike Counts and Stationary Activity Survey Penrith
	1105 - 1120	Carolyn Whitzman	Stretching the limits of planning for kids: a healthier approach to planning education and children's 'Right to the City'
	1120 - 1135	Michael Gunder	Making Planning Theory Matter: A Lacanian Encounter with *Phronesis*
	1135 - 1159		
	1150 - 1210	Discussion	
	1210 - 1300	Lunch	
Climate Change and Planning	1300 - 1315	Wendy Steel and Brendon Gleeson	After Copenhagen - Planning *in* climate change revisited
	1315 - 1330	Jennifer George, Peter Nelson, Marco Amati, Sandra Nichols, Richard Horsfield, Wendy Goldstein	Climate Change Adaptation Skills for Professional Planners informing new Teaching and Learning Themes for Planning Educators
	1330 - 1345	Jason Prior	Planning's relation to climate change: Moving beyond *separateness* to the *mutuality* of *being*
	1345 - 1400	Discussion	
	1400 - 1420	P.K. Dyer and D.J.Rosier	Visual Literacy: A necessary governance skill in planning graduates?
'Other' Visions	1420 - 1435	Jeremy Dawkins	Evidence from past futures
	1435 - 1450	Sue Vallance	Planning for sustainability or 'taking the blue pill'
	1450 - 1505	Discussion	
	1505 -1525	Afternoon tea	
		break	
	1525 - 1700	Fieldtrip	Fieldtrip - Walking

Monday 19th April

Time	Authors	Issue Title
0830 - 1030	Neil Sipe	Future of ANZAPS
1030 – 1100		Morning tea
1100 - 1200	Steve Hamnett	Accreditation
1200 - 1225	Paul Maginn	WPSC 2011 Update
1225 - 1230	Ali Memon	Conference Closing Ceremony

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