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Contested view of sustainable natural resource management

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The search for sustainable agricultural systems is one of the biggest challenges Australia currently faces. Yet there is a wide range of often conflicting views on how to achieve this. This thesis explores the way community Landcare groups construct particular discourses and pursue particular practices of sustainable natural resource management. It adopts a *social constructionist* approach to examine the way four community Landcare groups in the Western Division of New South Wales are handling the problem of invasive native scrub (INS). As this thesis highlights, community Landcare groups in the Western Division have taken on an advocacy role in addition to the management role that typically characterises Landcare. The reconceptualisation of 'Landcare as advocacy' adds a new dimension to research on Landcare that has not previously been explored. This thesis will argue that Landcare groups have adopted this advocacy role because of differences in the priorities of Landcare members (predominantly pastoralists) to other interest groups in relation to the management of native vegetation. These differences have come to light in response to the *Native Vegetation Act 2003*. Further, it is contended that Landcare has *allowed* farmers to engage in native vegetation debates due to the communication networks provided by Landcare groups, and access to government funding and technical advice. Finally, it is argued that the emergence of this advocacy role amongst Western Division Landcare groups is a result of the specific spatial (and ensuing cultural) context in which the groups operate. In one of the more remote farming areas of New South Wales, a suspicion of 'outsiders' has fuelled opposition to the *Native Vegetation Act 2003*. Pastoralists have been united in a common belief that 'farmers are the best land managers' and should not tolerate increased regulation of farm management activities.

Development of a GIS-based coastal lowlands simulation model (CLSM)

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In recent years, concern has grown over projected climate change, sea level rise and its subsequent impacts upon coastal environments. As a result, environmental managers have a pressing need for comprehensive predictive modelling tools with which to aid responses to this burgeoning environmental change. To address this need, this study involves the development of a GIS-based Coastal Lowlands Simulation Model (CLSM) to simulate the impacts of sea level rise on the morphological aspects of estuarine systems. The CLSM extends the Estuarine Sedimentation Model (ESM), developed by Stolper (2002), to improve applicability on mid-term management time scales, and does this by including additional parameters required to model the evolution of the bulk depositional thickness in the bed of an estuary. These parameters include accretion, erosion, compaction, as well as El Nino Solar Oscillation (ENSO) cycles. As a fully customisable model, the CLSM is an overarching framework which can take outputs from other models, and use these as inputs in simulations to quantify and map changes in bulk depositional thickness and potential ecology in an estuary. Additionally, the integration of the CLSM algorithms into *ArcGIS* through the use of the scripting language *C#* allows coastal managers to examine morphological 'what if' scenarios visually in a spatial context. Calibration and confirmation of the model was undertaken using Digital Elevation Model (DEM) and habitat data from Sydney Olympic Park Authority (Zeng *et al.*, 2006), while experiments were performed on an idealistic DEM.

References

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The attitudes and behaviours of dairy farmers towards natural resource management

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Natural Resource Management (NRM) adoption in rural Australia has become an important component towards building an environmentally sustainable agricultural industry. The European style of farming has long been deemed unsustainable for Australia's arid conditions. However, NRM adoption has been problematic, the reasons for which are often multifaceted. The attitudes and behaviours of farmers, and socio-cultural and economic factors greatly influence the adoption of NRM initiatives. The dairying industry makes for an interesting study, as in Australia it occurs largely in environmentally sensitive, land-use competitive environments which are rich in natural resources. Further, as a result of changes in the dairying industry regarding deregulation in 2001 and economies of scale, the number of dairy farms has decreased, while those that remain have intensified production so as to remain financially viable. Despite this, there are limited studies related to dairy farmers' adoption of NRM. Thus, this study will aim to survey and interview dairy farmers within the Hunter-Central region of NSW to determine their attitudes and behaviours towards NRM. Through this, the study will also identify constraints and motivations, and situational factors associated with NRM adoption; with the aim of contributing to the formation of more effective environmental agricultural policies.

Local action on climate change: worthwhile or futile? A look at local councils within Sydney

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This thesis investigates the effectiveness of local governments taking actions to reduce greenhouse gas emissions. In particular it looks at several local councils within Sydney, chosen on the basis of their participation in the Cities for Climate Protection Program (CCP). The complexity and far reaching effects of climate change raise concerns at a global scale, yet realistically speaking it is at the local level that emissions occur and impacts will be felt. As such, this research project contextualises the place that local authorities can and should play in addressing this phenomenon through: analysis of relevant contemporary academic literature; outlining the science of climate change; discussing the efforts to date of international, national, state and local authorities; and through the views, perceptions and opinions of thirteen participants from government and non-government organisations, as well as prominent climate change authors, interspersed with findings of content analysis conducted on twelve local council State of the Environment reports.

Findings of the research project highlighted the strengths and barriers that exist to successful implementation of local actions that address climate change. These findings led to a number of conclusions: local initiatives such as CCP provide an ideal vehicle to create successful networks of change; there is enormous potential for local authorities to contribute to reducing greenhouse gas emissions, though funding and leadership present significant barriers to success; it is imperative for greater integration at all levels of state and non-state actors, as without this efforts will not reach full potential; stressing the co-benefits of actions, such as the cost benefits of electricity efficiency, is a successful way to address the greenhouse problem, though is contentious should the climate change message be eliminated from the equation entirely; State of the Environment reporting provides an opportunity to educate and inform if important changes can be made; and local authorities need to recognise the limitations that exist and endure regardless. This leads back to the thesis question: are local actions towards climate change worthwhile or futile?

Aquaculture information networks in central Thailand

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The aim of this research is to determine how the context of the peri-urban environment affects aquaculture information networks in Pathumthani Province, Central Thailand. To address this research objective, three subsidiary objectives were examined: Firstly, Pathumthani Province was considered in the context of being 'peri-urban' using National Statistics Office data and existing literature, particularly the *Desakota* model developed by Terry McGee (1989). Pathumthani was found to exhibit most of the characteristics consistent of a peri-urban environment. Secondly, small-scale tilapia aquaculture was presented in the context of 'peri-urban aquaculture' using existing literature and field observations in Pathumthani Province. Thirdly, semi-structured interviews examined both the actors involved in peri-urban tilapia aquaculture and their information networks. It was found that most farmers still use traditional systems of information collection, relying on trusted networks of friends, family members and neighbours, rather than the Department of Fisheries or private companies.

From the literature, six key components that characterise peri-urban areas were identified, including: employment, migration and labour, transportation and telecommunications, social networks and markets. These aspects were assessed using the literature in combination with data collected from the semi-structured interviews. Results indicate that these aspects have a limited impact on aquaculture information networks in Central Thailand. The traditional networks of information exchange underline what characterises 'peri-urban', where traditional interactions (such as those within peri-urban tilapia aquaculture information networks) exist alongside the mixed land uses and activities in the area.

Can increasing residential densities produce more environmentally sustainable travel behaviour?

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There is growing concern over society's reliance on the automobile for travel and its associated problems. Changes to urban form, particularly increasing residential densities, have been suggested as a way to make travel behaviour more environmentally sustainable by decreasing automobile use for travel. It is hypothesised that increasing residential densities will bring about this change through reducing the distance between actives, thus facilitating walking and cycling, and increasing the level of public transport service, making it more convenient. However, when the relationship between residential density and travel behaviour is examined in empirical studies there are differences in the strength of the relationship found. There is also a lack of Australian research and questions over the applicability of overseas research findings to Australian situations. The proposed study will begin to fill this gap by examining the change in travel behaviour which occurs when residents move into high density areas close to train stations in Sydney. This will be done through letter-box drop surveying which will ask a range of questions about previous and current travel behaviour and the reasons behind travel choices.

The making of a child-friendly city: exploring a rights-based policy approach to children at a local level

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The concept of child-friendly environments is becoming a hot topic¹ in political, planning and academic circles, but the approach to this idea is varied and conflicting. The way children and childhood are conceptualised within policy has important repercussions at the level of policy implementation. The approaches to children in policy, through either child welfare or child rights policies, are markedly different. Child-welfare policy is targeted for children deemed ‘at risk’ or ‘in need’ (Picton and Boss, 1981:6) whereas child-rights policy seeks to uphold children’s rights in all sectors that impact on children. How do these two policy approaches come together at a local level? This research investigates the uptake of the UNICEF *Child-Friendly Cities* Framework in the Australian city of Bendigo, as part of a shift in traditional approaches to children in planning and policy.

¹ In Australia alone there has been a National Child-Friendly Cities Conference annually since 2004, as well as Seminars in Melbourne, Sydney and Brisbane. Recent publications on the topic include B. Gleeson and N. Sipe (2006) *Creating Child-Friendly Cities: Reinstating kids in the city*, London: Routledge.

The impact of artificial entrance opening on water-storage capacity in an intermittently closed and open coastal lagoon

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Intermittently Closed and Open Lakes or Lagoons (ICOLLs) are artificially opened to release the natural build up of water in the backbarrier basin. This thesis investigates the impact of entrance management upon ICOLL basin-storage capacity. The investigation was based on three broad concepts defining the storage of water within the artificially managed ICOLL: (1) ICOLL opening regimes, (2) basin storage capacity, and (2) lagoon recharge rate. These concepts were investigated using Belongil Creek on the NSW north coast as a case study. The ICOLL Basin Model (IBM) was developed specifically for the study to provide a means by which to operationalise theoretical concepts. The IBM incorporates a digital elevation model (DEM) for the Belongil ICOLL basin and a hypsometric transfer function to compute basin storage capacity from the DEM for different water levels.

Land, brands and wine bottle labels: the consumption and commodification of Coonawarra

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Geographical Indications (GIs) designate a good's provenance and carry with them expectations of quality to consumers. The wine industry purports that the unique *terroir* of designated GIs (or wine regions) give premium quality wines characteristic flavours. GIs were applied to the Australian wine industry as a result of the 1994 EC-Australia Wine Agreement and Australian wine regions began a process of defining boundaries. This codification of rural space, and regional identity, is influenced by place politics, as demonstrated by the case study of this paper, Coonawarra (South Australia), a premium red wine producing region. GIs in Australia have been heralded as an opportunity for regional branding. It was expected that elements of regional identity selectively promoted through regional branding would be portrayed on the wine bottle label. The wine bottle label is last point of contact between winemakers and consumers. It is also the site where the GI is literally expressed. This presentation explores the consumption of wine regions via the wine bottle label using evidence from a series of focus groups of wine drinkers. It is argued that consumers supplant their own interpretations of quality onto wine bottle labels. Despite, the lack of reference to quality in the determination of Australian GIs, consumers use them as quality indicators. It is argued that GIs, as operated in the Australian wine industry, are conflicted and compromised entities that primarily capture land rent rather than provide information to consumers.

Elucidation of soil management classes using fuzzy k-means analysis of ancillary data

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The classification of soil management classes using fuzzy k-means (FKM) analyses of ancillary data has been well documented for the delineation of management classes at larger scales. This study demonstrates how the FKM algorithm can be used to analyse ancillary data in order to classify soil management classes at the field scale. The case study presented shows how an appropriate number of contiguous soil management classes can be delineated using apparent soil electrical conductivity (EC_a) and the spectral wavelength bands from an aerial photo. The resulting classification is compared with known soil properties through attribute variation reduction and statistical analyses. Using the fuzzy k-means analysis and Euclidean and Mahalanobis distance measures, two to ten soil management classes with α values of 1.8 and 1.4 respectively, were determined as being appropriate metrics to investigate a suitable number of soil management classes to be identified. The classes obtained were mapped through additive log ratio transformation and local ordinary kriging; a method that ensured the sum of these memberships to unity. Attribute variation reduction was used as a means of discerning an optimal number of classes. For the Euclidean distance the lowest variation within classes was approximately 62% for $\epsilon = 5$. For the Mahalanobis distance, the variation was around 60% for $\epsilon = 4$, but it produced more contiguous soil management classes. It was concluded that four soil management classes derived using $\alpha = 1.4$ with Mahalanobis distance measure provided the more sensible and contiguous groupings given the units are more easily managed and hence suitable for field-scale land management.

Singaporean migrants in Sydney

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In recent years the extent of skilled migration has dramatically increased as skilled migrants have moved across international borders with the advent of transnational corporations and globalisation. Whilst the literature has focused largely on the economic factors influencing skilled migration, little has been done on the social and cultural factors influencing these migrations. Skilled migrants have been characterised as highly mobile and sometimes even detached from place as they migrate from one global city to another in an effort to enhance their careers. Using qualitative methods, this study investigates notions of identity and home and shows how these factors influence or hinder the mobility of Singaporean migrants in Sydney. In examining Singaporeans in Sydney, it became clear that these migrants moved not only to enhance their careers but also for a variety of personal reasons. As the migrants maintained strong ties with Singapore and forged links with Sydney, it appeared that these migrant groups were not as mobile as recently thought, as many factors, including the need to maintain a close connection with family and friends, hindered their mobility.

Transnational acts amongst an invisible migrant group

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When thinking about migration studies, little thought is given to the English. Little is known about the experiences of this group in Australia, yet the main source country for the majority of the Australian population is England. This study contributes to this research gap. By examining the experiences of this invisible migrant group new insights into transnationalism are produced. This thesis had 4 aims. First was to understand the experience of migration for the English in Australia. Second, it set out to understand how the English identify in Australia and how this impacts senses of belonging. Third, it identified the drivers of transnational acts. Finally, it identified the forms of transnationalism the English are involved with. These aims were operationalised by qualitative semi-structured interviews of English migrants in Sydney. To date, the majority of transnationalism studies have focused on ethno-cultural groups who are distinctly different from the mainstream community. Instead, this study focuses on 'white' migrants in a predominantly 'white' community, thereby contributing to our understanding of the privileges of whiteness as well as extending on existing understandings of transnationalism. This thesis uncovered new avenues for research, such as how culturally privileged positions effect involvement in transnationalism.

Governance, resident perception and the expansion of Botany Bay

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The study reported here investigated local residents' opinions of the expansion of Port Botany, New South Wales (NSW) as well as their perceptions of Botany in general. This research was undertaken as there has been little investigation of the residents' opinions on the proposal. The research had three broad aims. The first aim was to investigate residents' current opinions on the proposal to expand Port Botany. An examination into the residents' perceptions of Botany was the second. The third aim was to determine residents' perceptions of governance. This aim was more speculative, and sought to identify a relationship between perception(s) of place and the manner in which it is treated. A constructivist framework was employed as it facilitates an analysis of the contested nature of place identity.

This research has identified a critical gap in the literature. This research has explored the relationship between the State Government and the (re)industrialization of Botany. Past research has concentrated on how local municipalities of industrial cities have attempted to (re)construct themselves as post-industrial cities (Rofe, 2004; Dunn *et al.* 1995; Short *et al.* 1993). This focus on local municipalities has overlooked the role of the State Government in the (re)construction of place. In Botany, the COBB has attempted to de-emphasize the industrial image of Botany. The State Government's approval of the Port Botany expansion however, was perceived to result in a (re)industrialization of Botany and undermine the COBB's plan to (de)industrialise Botany. Respondents were under the impression that the State Government perceived Botany solely as an industrial area, ignoring the more positive identities of the area. On the contrary, respondents spoke of the COBB as attentive and caring and more significantly, defending the residents' against the expansion. More research into this nexus between governance and the treatment of place is needed to appreciate how constructions of place may dictate its treatment. Moreover, strategic planning should incorporate a more holistic understanding of place, rather than treating places in a somewhat stereotyped fashion.

Towering Incentive: procuring globality through skyscraper construction

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The Towering Incentive research project examines the growing role that skyscrapers play in attracting global stature to a place. The author identifies specific strategic practices that governments and private companies undertake at a local level which seek to commodify and subsequently harness globality. Arguing that skyscrapers are an increasingly important mode through which cities can engage in metaphorical global dialogues, this work seeks to develop an understanding of the 'imagined dimension' of supertall buildings. The relationships between private companies and government bodies involved in skyscraper construction are explored to discover what motivations and ideas of globality underpin the construction of iconic modern-day skyscrapers. Three case studies are drawn upon: Shanghai in China, Dubai in the United Arab Emirates and Brisbane in Australia. By undertaking interviews and through support from secondary sources, these case studies show the importance of the 'local dimension' in altering global stature. Key individuals are often responsible for creating a new 'imagineering' of space, and it is impossible to consider a skyscraper's global dimension without them. Fieldwork undertaken for these case studies reveals that iconic buildings are constructed more for the purposes of identity formation than for the physical need for space. It is argued that key stakeholders consider the creation of architectural spectacle to be an efficient and reliable method of 'procuring globality'.

Just transitions in the Hunter? Entitlement and responsibility in the BHP Newcastle Steelworks closure, and lessons for environmentalists challenging the Hunter Coal Industry

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The goal of just transition aims to ensure a fair outcome for workers affected adversely by industry change, especially when it is motivated by environmental reform. This study focuses on the 1999 closure of the BHP Steelworks in Newcastle, as an example of a managed process of just transition that supported workers and diversified the regional economy. By analysing evidence from stakeholder interviews and print media, this study pieces together the procedural and political factors that contributed to the successful outcome. It then considers whether lessons from this example can be applied to the environmental challenge of justly scaling down the Hunter coal industry, to address climate change.

Redfern, gateway to Waterloo: the changing role of the state in urban development –a case study of the Redfern-Waterloo Authority

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Neoliberal restructuring in response to global economic crisis since the late 1970's might suggest that in order to unleash market forces, states have become less interventionist. Somewhat paradoxically however, deregulationist states in order to manufacture markets and simulate or strengthen competitive forces are often strikingly interventionist. This paper analyses the changing role of the state in urban development via the case study of the Redfern-Waterloo Authority (RWA) a recent 'new state space' in Sydney. The Redfern-Waterloo Authority (RWA) was established in late 2004 by the NSW state government to address social problems in the Redfern-Waterloo area and to ensure Sydney's viability as a city is maintained by facilitating 'global city' activity. Traditionally one of Sydney's poorest neighbourhoods the Redfern-Waterloo area contains high numbers of unemployed people, low-income families and concentrations of public housing, it also contains the most well known urban Aboriginal settlement known locally as 'the Block'. The establishment of the RWA provides interesting insight into the contradictory relations and increased inequalities occurring through 'actually existing neoliberalism'. This paper argues that while 'global city' strategies have undoubtedly replenished the profitability of government assets in the Redfern-Waterloo area, pursuing a 'global city' agenda has exacerbated inequalities and given expression to perverse exclusionary practices with regard to indigenous Australians.

Red earth, blue sky: *Australian Geographic's* image of Australia

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In light of recent academic studies that recognise the “banal”, everyday manifestations of nation as a relatively under-explored area of academic research, this thesis examines the role of visual representations in shaping notions of national identity within popular and everyday arenas. The dominance of imagery within contemporary western society makes visual mediums, including magazines, posters, advertising, graffiti, television and film, particularly important means through which nation is experienced. Consequently, this thesis examines the specific role of magazine imagery in imagining, constructing and perpetuating notions of national identity, using *Australian Geographic* as a case study. As a magazine that aims to celebrate Australia’s people, places, flora and fauna, *Australian Geographic* positions itself as an inherently geographical and nationalistic manifestation of everyday life, thus making it an appropriate, insightful and highly relevant case study for research on “banal nationalism”. Furthermore, this thesis employs content analysis, compositional analysis, semiotics and iconography in order to demonstrate the applicability of visual methodologies to the study of geographical phenomena. By using methods and theoretical concepts derived from the art history discipline, a framework for multidisciplinary studies within the fields of academic geography and art history is established.

Networks of empowerment amongst Fijian women's NGOs

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This research project aims to explore the manner in which women's NGOs in Fiji utilise relationships as a mechanism of empowerment. Since the 1970s research conducted on NGOs has increased in scope and variety. This increase in research can be linked back to the perceived successes of NGOs as development practitioners who may now be playing a larger role than the State. One area of study that has increased of late within the literature is studies pertaining to the relationships and networks that are utilised by these organisations. However these have been lacking in depth. This has in turn meant that the role that Southern NGOs have played in actively courting and maintaining these relationships has not been addressed in great depth. The information necessary to carry out this research was gathered via semi-structured interviews with six women's NGOs in Fiji. Via these interviews I have found three core areas in which relationships have been identified to be important to the effective provision of services to the women of Fiji. These core areas are: relationships with constituents; funding and governmental relationships, and, relationships with other Fijian NGOs. Within each of these core areas relationships have been observed to be incredibly complex and actively managed by the NGOs. I have found that these relationships are important mechanisms that are used by the NGOs to assist them in achieving their goals and are not as straightforward as is often portrayed.

Multiple knowledges in adaptive management: an investigation of decision-making in Barmah Forest, Victoria

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Recent debate in river management in Australia has focused on responding to social and biophysical complexity. More interdisciplinary, adaptive and flexible approaches in the form of adaptive management systems have been suggested in order to cope with this complexity and in developing the capacity to manage for variability and diversity. Attempts to implement adaptive and participatory approaches to decision-making in the highly stressed and politicised environment of the Murray Darling Basin has highlighted underlying institutional scientific assumptions, management paradigms and challenges in the application of adaptive management principles. This thesis investigates how environmental management agencies in Barmah Forest, Victoria, are responding to challenges of incorporating multiple, contested knowledges and diverse perspectives into adaptive decision-making frameworks. Specifically, the thesis uses geomorphological knowledge and Indigenous knowledge as case examples to investigate the capacity and mechanisms for the inclusion of biophysical and social knowledges into environmental decision-making. The findings of the thesis indicate a significant deficit in such capacity due to the persistence of reductionist scientific approaches, command and control management and by lack of recognition of the contribution of Indigenous and geomorphological knowledges to adaptive management. This requires a re-examination of the extent to which the reality of institutional decision-making reflects recent developments in thinking about adaptive management.