

ENVIRONMENTAL IMAGINARIES: Climate Change as an Object of Urban Governance

Diana MacCallum¹, Wendy Steele², Jason Byrne², Donna Houston³
¹Curtin University of Technology, Perth, Australia, ²Griffith University, Gold Coast, Australia, ³Macquarie University, Sydney, Australia

INTRODUCTION

Over the last few years, Federal climate change policy has emerged as a crucial point of difference between the major political parties, creating uncertainty around Australia's measures to meet its commitments under the Copenhagen Accord. The difference is grounded in perceptions not only of the scientific evidence for the phenomenon but, perhaps more importantly, of the economic implications of our response to it – the future Carbon Tax announced on 10 July 2011 was met with widespread protests on these grounds. For much of 2011, the controversy has played against a background of dramatic natural disasters, including an extraordinary rush of severe weather events at the start of the year (floods throughout the eastern states, the inundation of Brisbane; bushfires in Perth; a heat wave in SA; historic snowfall in Europe and USA, heatwaves in USA and Japan) which served as sharp reminders of our peculiar vulnerability – as one of the driest continents and most coast-hugging societies in the world – to climate change impacts.

Over the same time, state and local governments have been quietly (or otherwise) progressing their own agendas and measures to mitigate and/or adapt to these threats. Indeed, much of the initiative on climate change policy in Australia, particularly in building adaptive capacity, has been taken at these 'lower' levels of government for some time, especially prior to 2007 when Australia was not signatory to the Kyoto protocol (Betsill/Bulkeley 2006). Preferred responses at the state level seem to have fallen into a small number of categories: subsidising 'green' technologies for industries, infrastructure, residential developments and homes; promoting more 'energy efficient' urban forms; and risk management for storm surge and sea level rise (Byrne et al. 2009).

As the second of these categories indicates, metropolitan planning has been clearly identified as a site for climate change response, by governments and scholars alike (Australian Government 2011; Matthews 2011; Gasper et al. 2011). This is realised in the COAG agreement of December 2009, which requires not only the publication of all metropolitan planning strategies by 2012, but also that they address climate change mitigation and adaptation among other 'nationally-significant policy issues' (COAG 2009). In this paper, therefore, we interrogate those metropolitan strategies completed so far – SEQ (Queensland 2009); Adelaide (SA 2010); Perth (WA 2010) and Sydney (NSW 2010) – to identify how each treats the issue of climate change. The special focus of this analysis is whether – and, if so, how – climate change is imagined as a *social* issue, rather than as a purely environmental and/or economic one.

CONCEPTUAL FRAMING: THE CLIMATE-JUST CITY

Our attention to the social aspects of climate change response is driven by both practical and theoretical concerns. There is growing evidence that climate change will impact most brutally on populations already marginalised by economic and cultural forces; that its well-documented implications for (e.g.) health, employment and security are likely to disproportionately affect communities which are vulnerable due to poverty, age, minority status, family structure, land tenure, poor infrastructure and access to services (Kelly/Adger 2001; Sherrard/Tate 2007) and, thus, magnify existing socio-economic inequities (Gasper et al. 2011). However, public discourse and policy responses tend to focus on technology subsidies and financial risk management – witness for example recent media attention to situating liability in relation to sea-front properties (e.g. Fyfe 2009; Wilkinson 2009; Hope 2011) – creating a danger that the benefits of government action will unduly flow to business and wealthy property owners, exacerbating rather than addressing the inequities of uneven urban development. How might this danger be mitigated?

We draw on a basic insight of the environmental justice movement (Bullard 1993; Haughton 1999; Cutter 2006; Wilson et al. 2010) – that the distribution of environmental goods and harms tends to follow that of economic goods and harms, particularly within cities. We see climate change as a crisis which is, self-evidently, both environmental and economic, and whose potential to entrench and exacerbate this tendency is therefore a crucial object of concern for city planners. We do not believe that the answer lies straightforwardly in financial compensation measures, as has been proposed under the Carbon Tax package – such measures intensify the technocratic nature of policy approaches and often prove short term, failing either to address structural issues which shape environmental and social injustice, or to grant agency to the

marginalised. Urban environmental justice, then, has a clear climate dimension, in which urban spatial planning is implicated. Current discourses and political efforts surrounding *climate* justice, however, are realised largely in relation to the global scale, concentrating on differences in responsibility and vulnerability between developed and developing nations (e.g. Angus 2009; Goodman 2009); relatively little attention has been paid to this important issue either within the developed country context or at the scale of the city (though this is changing – see Brotherhood of St Laurence 2007; Friends of the Earth 2010; Fritze/Wiseman 2009). Moreover, consideration of *ecological* dimensions of climate justice – the shifting relations between humans and non-humans – has barely been considered in relation to cities, in spite of increasing recognition of cities as ecological, ‘nature-metabolising’ systems (Heynen et al. 2006; Swyngedouw 2006). Our project is addressed to these gaps. Its aim is to integrate – conceptually, analytically and practically – socio-economic, environmental and ecological justice concerns at the urban scale, placing them in the context of the crisis posed by climate change.

In undertaking this rescaling of the climate justice concept, we recognise the trans-scalar nature of the practices, relations and identities underlying it, including those of governance networks across scales and across state-non-state boundaries (Betsill/Bulkeley 2006). We can conceive of environmental and socio-spatial inequities, metaphorically, as fractal, reproduced at all scales from the global to the personal. Urban policies and plans are embedded within and recontextualise internationalised agreements, discourses and practices which define and pursue economic growth in particular ways (cf. Wodak/Fairclough 2010), and which have, as a direct consequence, often served to compound rather than change conditions of poor social equity, environmental health and ecological integrity in neighbourhoods (Liverman 2009). Equally importantly, many nationally institutionalised inequities are felt keenly at the level of personal and family identity, as associated discourses normalise particular bodies and relationships (Baldwin 2009). Fainstein’s (2010) ideal of the ‘just city’, founded on the imperatives of democracy, diversity, difference and equity responds to these felt injustices across institutional scales, recognising the complex interactions between citizenship, neighbourhood conditions and State action. In the context of environmental crisis, though, the just city ideal needs also to take into account the equally complex relations between people and nature – climate change being a globally-felt, prominent and alarming manifestation of those relations.

Analytically, we begin from the position that injustice has both material and discursive aspects, and that these aspects mutually affect and reinforce each other. Recent insights from ‘cultural political economy’ (Jessop/Oosterlynck 2008) highlight how public discourses arise in particular political-economic contexts and, through becoming embedded in policy and investment decisions, come to shape concrete material conditions. Jessop (2007) uses the term ‘economic imaginary’ to describe how certain representations of the economy – a diverse, complex, dynamic realm of human activity – may become discursively fixed as objects of state governance; the ‘knowledge-based economy’ is an iconic example. Extending this notion to climate change, we might conceive of a policy setting immersed in a particular set of ‘environmental imaginaries’: dominant reifications of the human-nature relationship which delimit the scope and complexity of the problem and limit our range of concrete responses. These ‘imaginaries’ might be related to the more familiar ‘discourses’ or ‘storylines’ (Hajer 1995), but seen as fixed objects rather than (respectively) representations or explanatory narratives. In this sense, they can be seen as a ‘blackboxing’ (Callon/Law 1995) of frames and storylines that have become dominant in the discourse ‘marketplace’ (Eder 1996) To achieve such standing in public discourse and policy, imaginaries must resonate with our experiences, and also with popular storylines that help us to interpret these experiences.

Our purpose in this paper is to explore how such imaginaries are present in the current batch of Australian metropolitan strategies. These documents are significant because they provide a strategic framework for the city regions that currently accommodate over 70% of the population. They guide the work of planners by offering a hierarchy of desired urban outcomes linked both to national infrastructure funding and the statutory dimensions of local planning schemes. They help shape the trajectory of spatial settlements in which climate change and issues of climate justice are deeply embedded. We analyse these plans to ask what the implications are for our capacity to see climate justice as an issue at the urban scale. More specifically, we mobilise linguistic concepts – in particular the three-dimensional model of language from Halliday’s (1978) systemic functional grammar (SFG) – to ask a number of questions of each document:

- *Textual dimension* – How is climate change *thematised* as an object of metropolitan planning? Is it presented as such explicitly or implicitly? In relation to what other planning issues? What emphasis is it given through textual positioning and highlighting strategies?
- *Ideational dimension* – How is climate change *represented* and *explained* as a substantive issue? Are there any recurring metaphors or collocations surrounding it? What terms are used to describe it, and are these associated with scientific, economic, bureaucratic, welfare and/or other discourses? How is it explained, and at what scale(s)? How is it placed in relations of cause and effect with other

phenomena? What underlying storylines are realised in the plan's responses to it? And, in particular, how is climate change connected with eco-social justice?

- *Interpersonal dimension* – How are claims, arguments and responses in relation to climate change *legitimised* and *evaluated*? What intertexts and discourses are invoked as authorities? Do lexical and/or grammatical choices make affective, certainty or value judgements explicit ('appraisal', in SFG – Martin/White 2005)?

These textual features give concrete expression to how the field of urban planning imagines climate change; in the tradition of critical discourse analysis, we understand policy texts as realising dominant discourses and the institutional practices that produce them (Fairclough 2003, 2005). As such, they provide a point of entry to understanding the potentials and limitations of that field for realising an ideal of urban climate justice.

ANALYSIS: CLIMATE CHANGE IN THE PLANS

In this section, we summarise the analysis, as grounding for a discussion of those potentials and limitations. A detailed reading of each plan as a whole was supplemented with a systematic content search for the terms 'climate', 'carbon' and 'greenhouse', contextualising each occurrence in relation to the questions above. In addition, sections and chapters about climate change were searched for the terms 'social', 'equity', 'inclusion' and 'justice', to add to our understanding of the relations between these two broad concerns. Special attention was paid to teasing out intertexts and discourses shaping the content of those sections/chapters.

Thematisation

Three of the four plans explicitly identify climate change as a concern for urban planning, naming it in a chapter heading; however only Adelaide's *30 Year Plan* gives it its own chapter, separate from other environmental issues. Perth's *Directions 2031*, applying a different schematic formula, subsumes the issue to the general goal "A Sustainable City"; *Directions* provides little discussion of climate change at all, apart from a single page on the policy objective "mitigate and adapt to climate change" (WA 2010: 67).

The Adelaide plan gives the most space to climate change, not only giving it its own policy section (3 pages), but repeatedly emphasising it throughout the introductory material, naming it with sustainability as one of its three framing objectives, devoting ten (of 25) pages to it in the contextualising chapter, and raising it as a specific issue in relation to seven of the fifteen other policy areas. The exceptions to this are of two types: first (surprisingly), those areas concerned with transport, centres and infrastructure, whose relationship to climate change is assumed from framing in earlier sections (and repeated only in phrases like "energy efficiency"); second, without such earlier framing, the *social* policy areas of inclusion, housing, Aboriginal heritage and health.

Sydney's *Metropolitan Plan* places 'tackling climate change' with 'protecting Sydney's natural environment', as the fourth of nine key strategic directions (SD); climate change takes the first nine of 21 substantive pages devoted to this SD. The issue is raised in relation to four other SD, though two of these – centres and transport – mention only 'reducing greenhouse gas emissions' as a benefit of the policy, with no attention to climate change itself. While climate change is not raised in the equity chapter, the document does provide brief recognition of a link (somewhat under-developed, in our view) within the climate change chapter – the following is embedded in the middle of a paragraph on the main risks:

Those most vulnerable are socio-economically disadvantaged groups, the very young, the aged, the socially isolated or those with a pre-existing disease (NSW 2010: 180)

'Sustainability and Climate Change' is the first of twelve regional policy chapters in the *SEQ Regional Plan*, in which mitigation and adaptation are separately specified as policies. Adaptation is linked to natural hazards more generally, "including the projected effects of climate change and oil supply vulnerability" (Queensland 2009: 44). These policies are preceded within the chapter only by generic sustainability principles and monitoring. Like Sydney's, the SEQ plan identifies a link between climate change and social equity, this time in the chapter on social planning. Again, however, the text merely touches on this link with no further development – this quote is tacked onto a statement on oil supply vulnerability, part of a larger section on spatial patterns of disadvantage.

Climate change in SEQ will also affect groups in various ways. Disadvantaged groups are some of the most vulnerable to climate change effects. (Queensland 2009: 79)

In sum, all four metropolitan plans link climate change to a notion of 'sustainability' with emphasis on the natural environment, and either downplay or omit entirely any relations with social equity. Apart from Perth's, and framed by the COAG agreement's requirement to do so, all explicitly identify it as a salient theme for planning.

Representation and explanation

As suggested above, the associations in all documents represent climate change overwhelmingly as a natural-environmental issue. Within this framing, all also acknowledge that it is likely to have an impact on the economy, though in Perth's *Directions* this acknowledgement is limited to the following statement:

The economy and the physical environment will be impacted by climate change as governments move to reduce carbon emissions and as the changing climate affects food production, water provision and consumption, and infrastructure maintenance and operating costs. (WA 2010, 67)

Directions is unique in this set of documents in that it does not discuss climate change as a phenomenon – it offers no explicit explanation of it, and little justification for its presence in the plan, apart from its inclusion within some generalised lists of issues/challenges (pp. 19, 23). The other plans present climate change as an accepted fact – “our climate is changing” (SA 2010: 2) – and as either explicitly (SEQ, Adelaide) or implicitly (Sydney) human-induced, linked to ‘increasing concentrations of greenhouse gases in the atmosphere’ (Queensland 2009: 39). Even in the *Directions*, this connection is suggested (though not unambiguously) by the twice-repeated juxtaposition of ‘climate change’ and ‘carbon emissions’ in the paragraph quoted above. The fact that these connections can be invoked without elaboration suggests that a storyline (in Hajer’s [1995] sense) of “carbon emissions/greenhouse gases lead to climate change” has become somewhat institutionalised, and this narrative is carried into a range of mitigation responses which, further, tend to invoke personal energy consumption as the principal (in some cases, the only) source of emissions.

Indeed, this popular storyline [my energy use → carbon emissions → climate change = bad] seems to underlie the majority of planning actions proposed in relation to climate change, including: measures to shift personal transport patterns from private, fossil-fuelled vehicles to public and active modes, in part by increasing densities; construction standards to improve energy efficiency of dwellings and, to a lesser extent, commercial buildings; and ideas for ‘climate-positive’ precincts to encourage investment in renewable energy (particularly Sydney). This limited range of responses is particularly striking in the Sydney and SEQ documents, which both identify passenger transport and energy consumption as relatively minor sources of greenhouse gases, with industrial sources accounting for a majority of emissions (NSW 2010: 174; Queensland 2009: 42). However, only the Sydney plan includes explicit measures to address such sources, and these are generally expressed as good intentions rather than concrete actions – the government will “work with existing industries and manufacturers to identify opportunities to exchange materials, energy and by-products”, for example, and “consider a pilot to examine how Government can facilitate exchanges” (NSW 2010: 175).

More generally, in all four documents climate change is presented as a ‘challenge’, one given special status in the Adelaide plan as ‘one of the single biggest challenges confronting Australia and the rest of the world’ (SA 2010: 42). Three of the plans (Sydney, SEQ and Adelaide) recognise economic ‘opportunities’ (chiefly for renewable energy investment) in addition to environmental and urban planning ‘challenges’. The Adelaide plan also introduces the issue of scale, describing the challenge as both ‘nationally’ and ‘globally’ significant, but giving attention to the role of cities in relation to the problem (pp. 43-45), thus conceptualising it as a particular concern (presenting “challenges and opportunities” [p. 44]) for metropolitan governance.

The challenge of climate change, traditionally, has been one of mitigation, understood in these plans in terms of the storyline described above. All four of these documents, however, reflect a now mainstream understanding that mitigation is no longer an adequate response, that the impacts of climate change are sufficiently certain to achieve status as ‘reality’, and thus to require adaptive measures. Steele and Gleeson (2010) add urgency to this realisation with the claim that we are now ‘planning *in* climate change’, rather than in anticipation of its effects – contrary to the dominant framing of the SEQ plan, which usually places this challenge in the future, as one of set of ‘emerging’ or ‘long term’ issues, whose impacts are frequently described as ‘predicted’ or ‘projected’ (though it is also presented as a phenomenon that ‘is occurring’ in the present [p. 39]). And throughout the documents, the relatively recent acceptance of this reality framing is clear. Adaptive responses at this metropolitan level lack the concrete detail of mitigative ones, and tend to be expressed as ‘plans to plan’, as the authorities wait on further scientific data about the environmental impacts:

... adapt to the effects of climate change by developing adaptation strategies ... (Queensland 2009: 11)

Develop a climate change adaptation strategy ... (NSW 2010: 180)

The focus of specific adaptation measures, including most of the National and state-level research (e.g. Department of Climate Change 2009) contributing to the proposed plans, is almost exclusively the coast (identified by COAG and the Natural Resource Management Ministerial Council as a priority [Queensland 2009b: 2]); the chief exceptions are proposals to develop building standards for the sake of comfort in higher temperatures (Adelaide) and to increase green space as a local cooling strategy for built up areas (Adelaide and Sydney). This focus reflects an extension of the popular storyline: [climate change → sea level rise], which is invoked explicitly and without explanation in all four documents – in the case of *Directions 2031*, sea level rise is the **only** direct impact identified (though future water supply is also mentioned, the connection is not clear).

Two discursive frames have been repeatedly identified surrounding climate change adaptation: risk management and resilience (Davoudi et al 2009; Taylor et al. 2011). The former is essentially reactive, as the term 'management' suggests, while the latter is more visionary, an idea about the type of city/society/community we want in the context of environmental/economic crisis. While *Directions* give few clues as to its framing due to its cursory treatment of the issue, the Sydney and SEQ plans are firmly oriented to risk management, with climate change consistently described in terms of 'impacts', 'threats', 'risks' and 'implications'. SEQ makes this framing even more explicit, incorporating climate change adaptation under the more general heading of 'natural hazards', and translating the vision of resilience (p. 10) into policy as:

Reduce the risk from natural hazards, including the projected effects of climate change ... (Queensland 2009: 44)

Conversely, the Adelaide plan, while it also frequently collocates 'climate change' with 'risks' and '(potential) impacts', places much more emphasis on resilience, preferring this term in most 'intratextual framing' (MacLachlan/Reid 1994) moments such as vision statements and section headings. It is also the most persistent in its promise to seek advantage in a future "carbon-constrained economy" (pp. 3, 11, 46, 140).

Legitimation and Evaluation

The reactive/proactive distinction between risk and resilience may also be understood as one of affective orientation. Davoudi (forthcoming) has identified the discourse of adaptation in planning as an emergent reframing of the human-nature relationship, in which the natural environment is perceived as a threat rather than something to be enjoyed, exploited, traded, repaired or protected, as in earlier modern discourses (for analyses, see Frawley 1992; Healey/Shaw 1996; Myerson/Rydin 1996). However, the negative appraisal of 'threat' and 'risk' is somewhat counterbalanced by positive evaluations of the States' response – the NSW government's "strong leadership" (NSW 2010: 174) and the adoption by SA and Queensland of 'resilience' as a vision for the future. We can also see an attempt to 'balance' the affective element in the above-noted identification of opportunities and advantages as well as threats. The Perth plan, in spite of describing climate change as a "major challenge" (p. 67), is strangely neutral in its appraisal, avoiding words like 'threat', perhaps in deference to an enduring professional identity for planners – and for the public sector generally – as objective, impartial and dispassionate, in spite of much evidence to the contrary (MacCallum 2009).

Certainly, this model of professionalism is sustained in all four plans' avoidance of what Iredema and Grant (2004) call 'authentic' appraisal, evoking personal judgments and emotions, in favour of a 'performative' orientation to institutional functioning. Climate change is challenging, not frightening; it compromises infrastructure and liveability, not safety and happiness; it results from agent-free 'carbon emissions', not from stupid or evil human actions; its effects are under investigation, not chaotic and confusing. In this time of uncertainty, a public sector tradition – driven by general rather than personal interests, informed by evidence and reason rather than emotion, able to find unambiguous answers to complex problems – discursively supports its pledge to look after its citizens. This tradition – which we might call a 'professional imaginary' – is a crucial aspect of the State's legitimacy (Bevir and Rhodes 2007). The plans' presentation of a reassuring professional identity is, in the cases of Sydney and Adelaide, reinforced with frequent citation of scientific reports, mostly commissioned by governance institutions rather than peer-reviewed, and the use of graphs to show the quantitative (= reliable?) nature of the evidence.

In sum, the plans place the 'new' challenge of climate change in a framework of traditional public governance, taming its wild unpredictability and containing its generation of scary experiences within a discrete set of realms (weather, natural hazards, sea level rise, carbon-constrained economy). They display calm confidence in the government's ability to deal with the impacts in these realms using conventional strategies of regulation, infrastructure, negotiation and incentives, as well as to discover whatever evidence is needed to inform such strategies.

DISCUSSION: REIFICATION OF CLIMATE CHANGE AS AN OBJECT OF URBAN GOVERNANCE

'Climate change' is a reification, of course; the term backgrounds a remarkable variety of processes, activities, theories, measurements, events, experiences and relations that contribute to what it actually means. As an object of governance, climate change filters to the urban level from the global, where it is crystallised in such formal institutions as the UN Framework Convention on Climate Change and the Intergovernmental Panel on Climate Change, through national and state-level portfolios and policies. It also circulates less formally in transnational networks (e.g. ICLEI; activist networks such as Friends of the Earth) and media discourse to the point where its use has, as in these documents, become unreflective. It is an imaginary, a 'given', a phenomenon to be managed, tackled, addressed, embedded in a set of narratives that, in popular discourse, connect personal energy use with sea level rise and worsening weather. While debate continues as to the extent, precise impacts and relative importance (compared to investment, say) of climate change, little attention is paid to its subjective meanings.

The great danger of this is that the standard storylines – while valid in their own terms – are limited, and their institutionalisation can hamper planners' ability to imagine alternatives (MacCallum/Byrne 2009). A kind of closure is effected, fixing the nature of the phenomenon as a background to further discussion (Iedema 2003; Lemke 2000), and shutting off a range of other directions that policy might take. The presentation of climate change and the shaping of responses to it in our current metropolitan plans reflect a narrow view of the problem as a technical one: the science is published; the risk management framework is chosen; the scientific, economic, urban design and engineering experts have been called in. One important result of this 'sedimentation' of the narrative (Smith 1999) is that there seems to be no clear commitment to understanding and addressing the social and cultural impacts of climate change. Adelaide's *30 Year Plan*, by far the most attentive of the four to climate change both as a phenomenon and as a discrete concern, gives *no* space to the relation between climate and social justice, and those that do (Sydney and SEQ) appear to pay it only lip service.

Does this matter? We think so. If we are entering a period of profound economic restructuring – a 'carbon-constrained economy', as South Australia describes it – it is inexcusable to forget that "wherever there is widespread economic change, the vulnerable can be hit hard" (Nicholson 2007: 2). But the 'opportunities' touted in three of the plans are focused, as ever, on capital investment in new precincts and emerging industries. The plans are silent on how those investments might be directed to alleviate conditions in marginalised and vulnerable communities, or to avoid the tendency of economic change to increase the gap between rich and poor (Hamnett 1996). The 'imagined communities' of the metropolitan plans are the middle class, not those most vulnerable to climate change impacts: the poor, the marginalised and the dispossessed.

Secondly, as eco-social semiotician Jay Lemke pointed out some two decades ago, "where there are meanings enabled, there are necessarily also meanings disabled" (1993: 271). As an obvious example, the plans' overriding attention to personal travel and domestic energy consumption in relation to mitigation – also a function of, and serving to reproduce, the popular storyline – deflects attention from the responsibilities of industry. This is particularly striking in the Perth plan, whose sole mention of the causes of climate change is that "private car use ... generates more than 50 per cent of total transport emissions" (WA 2010: 67), and whose only mitigation measures are at the personal/household scale. In a State whose economic success is founded on foreign investment in gas and mining, it is easy to be cynical about this remarkable emphasis on altering consumption practices rather than production ones. While we acknowledge there may be many social benefits to reducing car and energy dependence (Dodson/Sipe 2008), the implications are disturbing; a sense that the onus for change is pushed 'down-scale' and that business as usual remains the rule for the big end of town. Further, the potential effects on affordability of a policy oriented to convenience, comfort and lifestyle (SA 2010: 139) should at least be considered.

Thirdly, the closure of the narrative in technical and scientific registers silences all sorts of voices using alternative registers – in particular those of everyday experience. Climate change policy, more than most, purports to interact with citizens primarily in 'educational' mode (MacCallum/Byrne 2009), seeking to change attitudes and behaviours rather than engaging respectfully with locally specific needs and practices. Climate change is a policy area which surely affects the management of country – where are the voices of

Indigenous Australians? It demonstrably affects the management of households – where are the voices of single, working and stay-at-home parents? It may have special ramifications for people with insecure housing tenures – where are these voices? And so on. Who knows what we might be missing? And who else might be missing out?

For all these reasons, the form that reified governance imaginaries such as ‘climate change’ take – like any hegemonic order – needs always to be questioned and, where appropriate, resisted. Where might we look for counter-hegemonic imaginaries?

CONCLUSION: TOWARDS AN ECO-SOCIAL IMAGINARY?

The tendency of policy discourse to fix imaginaries is a kind of what Bakhtin (1981) called ‘monoglossia’ – standardisation of particular forms of linguistic practice. However, as Bakhtin noted, and as recent research has corroborated (Lemke 1995; Iedema 2003), public discourse has *heteroglossic*, as well as monoglossic, tendencies. Texts are continually in dialogue with each other, shifting topics from one context to another – a (random) example of the sorts of paths taken: research report → national policy → local policy → media statement → radio interview → dinner conversation → local action group meeting → council submission → council report → etc. This can have a number of effects – as contexts shift, so too do meanings. Interpersonal and textual meanings, indeed, are *necessarily* altered in different contexts (Halliday/Hasan 1985; MacCallum 2008), and this affects substantive meaning as well. Hybrid discourses and practices develop at the boundaries of recontextualisation, sometimes leaving durable traces on the institutions that produce them (Fairclough 2005; MacCallum 2009) – we can actually understand such imaginaries as the ‘knowledge-based economy’; ‘carbon-constrained economy’ and ‘climate change’ as outcomes of such processes.

This phenomenon creates conditions of possibility in which all sorts of stories and experiences may travel into the sphere of governance; our question, then, is about how to create the space for traditionally marginalised stories – the social/cultural impacts of climate change, the ideological aspects of the existing imaginary – to do so. How can we discover such voices and guarantee suitable institutional boundaries on which a discourse and practice of urban climate justice can emerge? Our first point of entry may involve a shift in attention, from prediction and strategy to experience and action – from the ‘ought’ to the ‘is’, to turn the standard formula around (Campbell 2010). There are many organisations and individuals engaged in innovative action for climate change resilience and social inclusion in cities (Gibson-Graham 2008; MacCallum et al. 2009) – local food movements, needs-based services, volunteers, artists, bike cooperatives, non-monetary trading schemes, activists, nature conservation groups ... the list is effectively endless. We can surely learn from their practices.

We have argued elsewhere that a just approach to climate change policy requires an expansion of our normative horizon, that we need to pay attention not only to environmental and economic implications, but also to discursive and cultural effects, to social distribution of (more-than-financial) goods and harms, to governance processes, and to the interests of non-humans – that, in short, we need to develop and embed in our praxis a concept of the *climate-just city* (Steele et al 2011). Urban planning is well placed to integrate such concerns – it has a long tradition of doing so, at least in theory (Gleeson and Low 2000; Campbell 2006). But the urgency of the climate change challenge and the overwhelming complexity of its science seems to be producing a policy environment that is too technocratic and risk-management-focussed to allow this to happen. It would be a great pity to accept these limitations uncritically.

REFERENCES:

- Angus, I., ed. (2009) *The Global Fight for Climate Justice*, Resistance Books, London.
- Australian Government (2011) *Our cities, Our Future*, Department of Transport and Infrastructure, Canberra.
- Bakhtin, M. M. (1981) *The Dialogic Imagination*, University of Texas Press, Austin.
- Baldwin, A. (2009) ‘Carbon nullius and racial rule: race, nature and the cultural politics of forest carbon in Canada’. *Antipode* 41, 231-55.
- Betsill, M. & Bulkeley, H. (2006) ‘Cities and the multilevel governance of global climate change’, *Global Governance* 12(2), 141-59.
- Bevir, M. & Rhodes, R. (2007) *Governance Stories*, Routledge, London.
- Brotherhood of St Laurence (2007) *Equity in Response to Climate Change*. Roundtable Report. Melbourne.
- Bullard, R. (1993) ‘Anatomy of environmental racism and the environmental justice movement’ in Bullard, R., ed., *Confronting Environmental Racism: Voices from the Grassroots*, South End, Boston.
- Byrne, J., Gleeson, B., Howes, M. & Steele, W. (2009) ‘Climate change and Australian urban resilience: the limits of ecological modernization as an adaptive strategy’ in Davoudi et al.: 136-54.
- Callon, M. & Law, J. (1995) ‘Agency and the Hybrid Collectif’, *South Atlantic Quarterly*, 94(2), 481-507.

- Campbell, H. (2010) 'P. Marcuse et al. Searching for the Just City', *Planning Theory and Practice* 11(2), 301-02.
- Campbell, S. (2006) 'Green Cities, Growing Cities, Just Cities? Urban Planning and the Contradictions of Sustainable Development', *Journal of the American Planning Association* 62(3), 296-312.
- COAG (2009) Communiqué: Council of Australian Governments' Meeting, Brisbane 7 December 2009. http://www.coag.gov.au/coag_meeting_outcomes/2009-12-07/docs/20091207_communique.pdf (25/3/11).
- Cutter, S. (2006) *Hazards, Vulnerability and Environmental Justice*, Earthscan, London.
- Davoudi, S. (forthcoming 2012) 'Climate risk and security: New meanings of 'the environment' in the English planning system', *European Planning Studies*.
- Davoudi, S., Crawford, J. & Mehmood, A., eds. (2009), *Planning for climate change: strategies for mitigation and adaptation for spatial planners*. Earthscan, London.
- Department of Climate Change (2009) *Climate Change Risks to Australia's Coast*, Commonwealth Government, Canberra.
- Dodson, J. & Sipe, N. (2008) 'Shocking the Suburbs: Urban Location, Homeownership and Oil Vulnerability in the Australian City', *Housing Studies* 23(3), 377-401.
- Eder, K. (1996) *The Social Construction of Nature: A Sociology of Ecological Enlightenment, Theory, Culture and Society*, Sage, London.
- Fainstein, S. (2010) *The Just City*, Cornell University Press, Ithaca.
- Fairclough, N. (2003) *Analysing Discourse: Text Analysis for Social Research*, Routledge, London.
- Fairclough, N. (2005) 'Critical discourse analysis in transdisciplinary research' in Wodak, R. and Chilton, P., eds., *A New Agenda in (Critical) Discourse Analysis*, Benjamins, Amsterdam, 53-70.
- Frawley, K. (1992) 'A 'green' vision: the evolution of Australian environmentalism' in Anderson, K. and Gale, F., eds., *Inventing Places: Studies in Cultural Geography*, Longman Cheshire, Melbourne, 215-34.
- Friends of the Earth (2010) 'What is climate justice?' <http://www.foe.org.au/climate-justice> (15/10/10)
- Fritze, J. & Wiseman, J. (2009) 'Climate justice: key debates, goals and strategies' in Moss, J., ed., *Climate Change and Social Justice*, Melbourne UP, Melbourne.
- Fyfe, M. (2009) 'Sea level rules need to go further: mayor', *The Age*, 13 November. <http://www.theage.com.au/opinion/blogs/climate-run/sea-level-rules-need-to-go-further-mayor-20091113-id2e.html#ixzz1TAc2yc2u> (20/6/11).
- Gasper, R., Blohm, A. & Ruth, M. (2011) 'Social and economic aspects of climate change on the urban environment', *Current Opinion in Environmental Sustainability* 3, 150-57.
- Gibson-Graham, JK. 2008. 'Diverse economies: performative practices for "other worlds"', *Progress in Human Geography* 32(5), 613-632
- Gleeson, B. & Low, N. (2000) *Australian Urban Planning: New Challenges, New Agendas*, Allen & Unwin, Sydney.
- Goodman, J. (2009) 'From global justice to climate justice? Justice ecologism in an era of global warming', *New Political Science* 31(4), 499-514.
- Hajer, M (1995) *The politics of environmental discourse*, Cambridge UP, Cambridge.
- Halliday, M. (1978) *Language as social semiotic: The social interpretation of language and meaning*, Edward Arnold, London.
- Halliday, M. & Hasan, R. (1985) *Language, Context, and text: Aspects of language in a social-semiotic perspective*, Deakin UP, Geelong.
- Hamnett, C. (1996) 'Social Polarisation, Economic Restructuring and Welfare State Regimes', *Urban Studies* 33(8), 1407-30.
- Haughton, G. (1999) 'Environmental justice and the sustainable city', *Journal of Planning Education and Research* 18, 233-43.
- Healey, P. And Shaw, T. (1994) Changing meanings of 'environment' in the British planning system', *Transactions of the Institute of British Geographers* 9, 425-38.
- Heynen, M, Kaika, M. & Swyngedouw, E. (eds.) (2006) *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, Routledge, Abingdon.
- Hope, E. (2011) 'Beach Suburbs Face Removal', *The Mercury*, 13 July, http://www.themercury.com.au/article/2011/07/13/245251_todays-news.html (25 July 2011).
- Iedema, R. (2003) *Discourses of Post-Bureaucratic Organization*, John Benjamins, Amsterdam.
- Iedema, R. & S. Grant (2004). 'Revisiting Appraisal in the light of public-organisational discourse, or: the institutionalization of emotive meaning', ASFLA, Brisbane.
- Jessop, B. (2007) *State Power: A Strategic-relational Approach*, Polity Press, Cambridge.
- Kelly, P. and Adger, W. (2000) 'Theory and practice in assessing vulnerability to climate change and facilitating adaptation', *Climate Change* 47, 325-52.
- Lemke, J. (1993) 'Discourse, Dynamics, and Social Change', *Cultural dynamics* 6(1), 243-75.
- Lemke, J. (1995) *Textual Politics: Discourse and Social Dynamics*, Taylor Francis, London.
- Lemke, J. (2000) 'Opening Up Closure: Semiotics Across Scales' in Chandler, J. & van der Vijver, G., eds., *Closure: Emergent Organizations and their Dynamics*, NY Academy of Science, New York, 100-111.

- Liverman D. (2009) Preface: Suffering the Science, *Climate Change, People and Poverty*. Oxfam International.
- MacCallum, D. (2008) 'Participatory Planning and Means-Ends Rationality: A Translation Problem', *Planning Theory and Practice*, 9(3), 325-43.
- MacCallum, D. (2009) *Discourse Dynamics in Participatory Planning: Opening the Bureaucracy to Strangers*, Ashgate, Farnham.
- MacCallum, D. & Byrne, J. (2009) '(Ignoring) Alternative Discourses in Local Climate Change Policy: A South East Queensland Study', SOAC, Perth.
- MacCallum, D., Moulaert, F., Hillier, J. & Vicari-Haddock, S., eds. (2009) *Social Innovation and Territorial Development*, Ashgate, Aldershot.
- MacLachlan, G. & Reid, I. (1994) *Framing and Interpretation*, Melbourne UP, Melbourne
- Martin, J. & White, P. (2005) *The Language of Evaluation: Appraisal in English*, Palgrave Macmillan, Chippenham.
- Matthews, T. (2011) Climate Change Adaptation in Urban Systems: Strategies for Planning Regimes, Issues Paper 32, Urban Research Program, Griffith, Brisbane.
- Myerson, G. & Rydin, Y. (1996) *The language of environment: A new rhetoric*, UCL Press, London.
- New South Wales (2010) *Metropolitan Plan for Sydney 2036*, NSW Government, Sydney.
- Nicholson, T. (2007) 'Introduction', in Brotherhood of St Laurence, 1-3.
- Queensland (2009). *South East Queensland Regional Plan 2009-2031*, Queensland Government, Brisbane.
- Queensland (2009b). *South East Queensland Climate Change Management Plan: Draft for Public Consultation*, Queensland Government, Brisbane.
- Sherrard, J. & Tate, A. (2007) 'Equity in response to climate change roundtable: An Australian snapshot', in Brotherhood of St Laurence, 24-35.
- Smith, D. E. (1999) *Writing the Social: Critique, Theory and Investigations*, University of Toronto Press, Toronto.
- South Australia (2010) *The 30 Year Plan for Greater Adelaide*, DPLG, Adelaide.
- Steele, W. (2010) *Securing the Australian city: What is the national adaptation role in a climate-constrained future?* Issues Paper 14, Urban Research Program, Griffith University, Brisbane.
- Steele, W and Gleeson, B (2010) 'Planning in Climate Change', in *A Climate for Growth: Planning South-East Queensland*, UQ Press, Brisbane.
- Steele, W., MacCallum, D., Byrne, J. & Houston, D. (2011) *Imagining the (climate-)just city*. WPSC, Perth.
- Swyngedouw, E. (2006) 'Circulations and metabolisms: (Hybrid) Natures and (Cyborg) cities', *Science as Culture* 15(2).
- Taylor, B., Heyenga, S., Wallington, T. & Harman, B. (2011) 'Urban growth and climate adaptation: Divergent discourses and implications for governance', WPSC, Perth, July.
- Western Australia (2010) *Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon*. WAPC, Perth.
- Wilkinson, M. (2009) 'Make Evacuation Plans', *Brisbane Times* 27 October, <http://www.brisbanetimes.com.au/environment/make-evacuation-plans-20091027-hgyn.html#ixzz1TBDbf6vE> (23/8/10).
- Wilson, S. M., Richard, R., Joseph, L. & Williams, E. (2010) 'Climate change, environmental justice, and vulnerability', *Environmental Justice* 3(1), 13-19
- Wodak, R. & Fairclough, N. (2010) 'Recontextualizing European Higher Education Policies' *Critical Discourse Studies* 7,19-40