The role of contestable processes in advancing sustainability in transport and planning

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Abstract

Sustainable transport requires not only solid evidence to support policy and practice, but also to allow this to be examined with a high degree of transparency. Not all technical reports have the supporting evidence (or indeed models) made readily available, and even fewer provide enough material and methods to allow others to reproduce or evaluate the methods used as well as the results reported, or to assess alternatives not covered in the report. Control over such issues is a matter of governance. Governance issues are important in advancing sustainable transport, as organisations in both the physical planning and transport fields have longer policy development and implementation horizons than the urgency of changes towards sustainable practice now demands. Both transport policy and planning strategies need to adapt to meet these compressed horizons, but the very different cultures and professional perspectives and practices involved have to date produced strategies that have yet to be proved to work very well once in operation.

The themes that need to be introduced to address these barriers to improvement include (1) a contestable governance framework for evidence-based policy, and (2) the resulting larger role of the community in both the 'community' and 'technical' aspects of strategy development. These two themes are developed with reference to recent relevant GAMUT initiatives. One of the most important of these has proved to be a series of governance forums designed specially to allow auspicing of a broader range of significant parties to contribute to what is required in terms of changes in governance in both areas, without the special interests of any of the fields involved being given primacy. This initiative has worked well and allowed a broader range of public debate to occur, as such opportunities had become scarce and have been valued once a suitable framework has been recreated.

Peer reviewed paper

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Enabling contestability of evidence-based policy is an increasingly practical possibility. Examples of data and model sharing between community and government have begun to appear, as have examples of the shifts in community power that arise once the technical skills in the community are enabled. This is complemented by growing use of crowd sourcing (community input) to generate relevant and valued data. These are harbingers of a different form of consultation, which allows greater flexibility of government to adjust policy in practice with lower political costs, enables greater effectiveness and more rapid response to the environmental, planning and transport changes now upon us, draws upon a larger and wider pool of expertise in the community as a whole, and is increasingly needed to address issues that are steadily increasing in frequency and complexity.

CONTEXT

Organisational structures involved in transport have progressively evolved over recent decades from being simply operational arms of government to a far more complex mix of public and private sector bodies. Expanded use of external technical skills, and shifts in the expectations of the public service have driven these changes.

The arguments for or against the desirability, efficiency or performance of these new and interrelated entities and responsibilities are not addressed here. We focus solely on the necessity to marshal greater pools of expertise and contributions to policy formation, debate and implementation to improve the processes and enable them to work more effectively and credibly.

The governance structures that enable coordination, responsiveness, strategic planning and community engagements have been made more complex by the waves of privatisation, and the complexity of the mixed agency, enterprise, commercial, contractual and administrative models of governance that have emerged. In any such emergent situation, a cool appraisal and reassessment of the benefits and problems, at regular intervals, is desirable. Strategic intent is often lacking, and the consequent tensions between the very different objectives and perspectives of political and public service can no longer be separated.

The observed steady increase in public concerns over transparency and accountability are an inevitable result of the confusions and lags in adapting the necessary governance structures.

There have been major barriers to change in planning and transport governance, some of which have disguised the need for change, and others that are not widely recognised as essential. Change is almost always difficult.

The practice of consulting at the strategic development stage, and assuming that the consequences of this will carry over as continued informed consent at a much later stage as the operational stage is reached, is one reason that these issues are often not readily visible.

The physical planning profession frequently follows this strategic consultation process as the major elements of change are embedded in a fresh strategic plan, with genuine efforts at community engagement at this point.

However, the interpretation of this plan in terms of operational decisions takes place many years – sometimes decades – later. The conceptual level of abstraction that a broad strategic plan requires is often not easily grasped, and the implications are not seen as immediate by many of the potentially affected parties. Special-interest groups are so much easier to access for consultation at this stage that their largely unrepresentative status for many of the stakeholders is overlooked. Securing responses at the early strategic stages is difficult, and efforts made to make them more tangible to wider group of stakeholders can easily founder. There are numerous examples of this, and even the best efforts have not followed through with a proper appraisal of the consultation process itself.

The initial efforts made to secure input to the Melbourne 2030[1] strategy were laudable and successful in securing very high quality attendance at the first round of consultations at the local (local government area) level. The importance of the consultation was signalled by the visible and engaged presence of senior Government staff.

The second round at the same level as well at the community level was well attended, but this time it was handled by very junior (and minimally briefed staff) with a printed sheet of pre-digested options, and started with a hurried short briefing by a senior staff member who then left. It would be very difficult to undermine the somewhat wary but effective initial engagement more efficiently if that had indeed been the intention. This type of experience set the stage for a long, expensive and, ultimately, largely disowned result some years later – Melbourne 2030. Although this process started well, with visibly engaged – and very capable – community members who were well able to deal

1 http://www.dse.vic.gov.au/melbourne2030online/ is the current comprehensive website.

with the abstract areas, this unusual opportunity was frittered away almost at once, leaving the firm (and as events turned out, possibly accurate) impression that the initial stage was simply to attract such people and then claim that they 'had been consulted'. This illustrates two key points:

- It is perfectly possible to engage the most highly skilled and influential members of the broader (i.e. non planning-specialist) community in strategic and tactical consultations of real complexity.
- This engagement needs to be taken more seriously and made more substantive, or it will be lost, and may turn into a negative contribution.

At no point of the multi-year Melbourne 2030 process were the data or models (where indeed they were used) made visible, transparent, auditable, accessible and usable for direct community use or appraisal, as this was not seen to be relevant. Alternatively, it may have been considered that it simply was not possible for the community to handle and understand, or the manpower costs assumed to be required to support it were infeasible. After all, it was only a 'strategic process' and broad principles were all that were being pursued, and indeed could have been had the initial implied engagement continued beyond the 'tokenistic' first meeting, to quote a phrase heard several times at the second meeting.

This sadly lost the momentum of the first so-promising round; this response had not been picked up, as appraisal of the process itself was not considered to be part of the consultation program. It was several years before the final strategy emerged – and closer to a decade or more before the horizons for action. Consequently, a percentage of those initially aware of the start of the process were no longer in the same locations, positions or life cycle stages by the publication date of the strategy – and a substantial fraction by the time the implementation actions would take place on the ground. No mechanism for substantive harnessing of the impressive community-based skills was sought or attempted (or that was at least the impression gained by a large number of potential participants).

This change in population over time affects not only the planned-for but also the planners themselves. The generation involved at the start of a long strategic-planning development is not the same as that present when it was reported. Certainly, by the time the actions start to take place on the ground another series of long-lagged effects will have occurred, and the consulter and the consulted may have become rather different people to those who were involved at the beginning of the process.

The operational project impacts that begin to emerge are quite properly carried out using the physical planning principles of the profession, which assumes that the strategic development stage is the key stage at which to undertake community and stakeholder consultation. This does not fit well with the affected parties in the community at the time that the projects in the strategic plan are actually put in place. This is the point at which the community then present feels the impacts – and will react. These reactions will of course be focused on the current impacts rather than the long-distant strategic oversights to which 'they' will have been assumed to have responded.

At this operational stage it is common for wide consultation to elicit literally thousands of responses, some of which will be extremely cogent and substantial and raise issues that clearly need to be addressed. Even at the strategic planning stage a normal governmental response is simply to place any such submissions on a departmental website and perhaps to acknowledge their receipt. The Eddington East-West Central Area transport study of Melbourne is a specific example[2]. It is unusual for a considered analytical response to the many submissions to be prepared and published, and the volume and variety of such submissions make this a daunting process for the public service to undertake.

To make this concrete, we offer two contrasting responses to the Eddington report:

1. The formal GAMUT[3] feedback on the brief specification evaluations and modelling assumptions (Wigan 2008a) raised substantive issues, but the response was simply to place the submission on the website. No response to the substantive methodological and evaluation assumptions was offered.
2. The lobby group for Motorcycles (MRAVic) (Wigan & Ellis 2008) queried the complete omission of that transport mode, and secured a meeting with the Minister within a day of its submission, apparently in advance of its posting on the government website.

2 http://www.transport.vic.gov.au/DOI/Internet/planningprojects.nsf/AllDocs/E195C22162760C83CA2571ED0080D1E5?OpenDocument

3 GAMUT is the Australasian Centre for the Governance and Management of Urban Transport at The University of Melbourne.

The Eddington report consultation response system was clearly set up to respond very efficiently to any politically sensitive issues raised, but to ignore difficult and fundamental queries on the foundations and technical credibility of the study. From a tactical point of view this was probably correct, but the continued demonstration of the inability of the formal system to harness (let alone respond to) the community specialist expertise on offer raises the question 'How does the official side do this?'.

Clearly not easily, as consultants undertake most of the technical work, and cannot be expected to engage in what, as a post-study exercise, is largely a politically sensitive renegotiation of assumptions, option selections and evaluation criteria, and not easily executed by consultants under instruction.

It is easy to see that a collision of professional cultures is demonstrated in these quite different perceptions of 'consultation', its conceptual level and its content – and most of all its timing.

The sustained underinvestment in much of the State transport infrastructure also makes the lead times even longer. The process of project formation, deliberation, design and budget approval is already long; but by the time tenders are responded to and evaluated, the design process alone can easily take five years or more. This stretches the time between genuine efforts to consult on broad strategic principles and makes the apparent government uninterest[4] in consultation at the operational end points even harder to handle.

External events are making this long lag between broad strategy development and completion and on the ground action an increasingly serious problem when seeking community understanding and respect at the final construction stage. External pressures now becoming really important are (1) the increasing interaction between different areas and specialities in planning (transport, facilities and physical planning are simply some of them), making the process much harder at a bureaucratic level, and (2) the pressures of climate change and population shifts, which are collapsing the horizons available before action simply has to be taken.

Both styles of planning mechanisms offer real possibilities to shorten the interval from strategic planning to actual implementation, and any processes that successfully engage a wider range of expertise and community understanding are highly desirable.

MECHANISMS TO IMPROVE THE PLANNING PROCESS

There are several possibilities to improve the planning process discussed or implied by the last section of this paper. Some are widely known and conventional:

- Transparency
- Accountability
- Freedom of information

The steady growth in reliance of government on information technology makes three further options increasingly realistic:

- Data access
- Model access
- Process participation

The problems of transparency and accountability are continually under pressure from and for freedom of information rights, the stance depending on whether or not the party concerned is inside or outside government. Less familiar than the first three items are the data oriented ones.

Numerous eGovernment studies (e.g. Berntzen et al. 2006) suggest that data access can contribute to greater transparency. A more sophisticated version is now emerging from performance measurement studies of eGovernment and transparency. The highest levels advocated (Osimo 2008) are that such information that is made available should either be reusable (eg in an xml format) or directly accessible in a geo-referenced or viewable format (e.g. Wigan et al. 2007). These references cover a mix of technical and process approaches, but the policy frameworks are not clearly stated in any of them.

This does not mean to say that there are no successful examples to draw upon, simply that the overarching policy principles are not fully spelt out. Focusing on data exchange and utilisation processes, such an example is discussed by Wigan, Grashoff and Benjamins (2010), where the initiative, the technical geographic information system (GIS) and modelling, and ICT tools and infrastructure were community created, and the data is crowd-sourced (>4 million community edits so far) over the years of operation.

'Crowd sourcing' is a term that has rapidly come into wide use, as the community is increasingly drawn upon to provide basic data for many purposes. It has long been used in environmental areas such

4 The term 'disinterest' is often used, but is inaccurate as it refers to a lack of fiscal, influence or political engagement that might undermine the independence and integrity of any decision. Here we use 'uninterest' in its specific meaning of a lack of any active concern at all.

as bird and species counts; but, with the advent of ready access to precision measurement and online databases, it has spread to many wider uses. The enormously successful Galaxy Zoo project calling on the community to classify galaxies has been a great scientific success, and the access to online mapping has led to the creation of such community tools as OpenStreetMap, where contributions are made and their accuracy verified by community members.

This bicycle-specific enhancement project has been based, enhanced and built upon the crowd-sourced OpenStreetMap foundation. The regional governments in the Netherlands simply fund the Dutch Bicycle Federation (as a social good, responding to user demand) to manage and undertake the quality control aspects of this system, and minor developments extending it from bicycle routing to other human-powered modes, in particular for recreation, have naturally followed. This rising tide of community technical initiative and active engagement via data and information services is exactly the type of development that underpins and enables contestable evidence-based policy in the most positive possible way.

This illustrates a very different level of community expert engagement as well as a very different model of governance and process for data, consultation and deployment. Can this be generalised?

In general, the trend in policy formation and negotiation has developed expectations that evidence-based policy will form a basic part of policy development. Whether or not the evidence-based materials are used or followed in the final decisions is debatable and, in general, the recommendations shift substantially during the public and less public political processes that follow the production of evidence-based reports. This is an expected process, but the value of role that the reports play is often questionable.

Some of the ways in which such an apparently open process can be undermined include:

- careful restrictions on the terms of reference
- limitations on the options chosen, and
- factors included or excluded in the options appraised.

These are the standard modes of outcome management that have been adopted, but other less obvious modes have become more frequent and include:

- the sheer bulk of the reports (thousands of pages), and
- the very limited time windows for inspection and response.

To these we must now add lack of transparency, sensitivity analysis or credible validation of (or access to) the analytical models, tools or parameters used.

These ways of undermining evidence-based policy have become evident to enough of the community in transport and planning that the term 'policy-based evidence' has begun to be used (see Harding (2008) for such a usage in the UK) to summarise the growing decay of community credibility that has developed to date.

The model that we propose is best clarified by adding the key word 'contestable' to the evidence-based policy mantra (Wigan 2008b, 2011). Our stance is that *contestable evidence-based policy* is a valuable tool that enables both process and governance to be addressed, adapted and improved.

Contestability means that a very real potential exists to challenge the bases, assumptions, methods, evaluations and conclusions of policy studies. And although it might or might not actually be used, the clear potential that it *could be* can achieve behaviour changes that such an engagement would produce – even if it is not actually undertaken.

To enable contestability in transport and planning policy will require considerably wider legal and economic access to data, models and alternative generation and evaluation processes, to ensure that the threat of such engagement is clearly enabled, or far more situations will require such engagements to actually take place. The multiplier effect of (potential) contestability is a fresh and constructive governance influence of great value and efficiency.

CHANGING THE FRAMING OF POLICY FORMATION AND REVIEW

It is inevitable that most papers and proposals emerge from a single professional or academic culture, with unspoken (and often not closely examined) common assumptions and implicitly agreed limitations and scope. This is, after all, the very basis of the communities of practice (Wenger, McDermott & Snyder 2000; Bourdon & Kimble 2008) that create, hold and apply large bodies of knowledge across wide communities with a common ground of interest – extant or emergent.

One of the mechanisms to open up environments for debate and potential change is to use a strong independent brand to auspice genuinely different perspectives in an open forum. This is difficult to secure, as any of the credible, experienced and active

presenters needed for such meaningful debates will also have the diverse interests, substantial history and, indeed, current commitments and agendas that are in basic conflict with such an open engagement.

If a suitable formula could be found for such forums, this instrument could materially assist in placing rather different views of governance on a discussable (and indeed discussed) and credible basis. Once such issues can be discussed, and this has been endorsed by the authority figures presenting, then not only does the debate have the potential to shift but an implicit community of practice (formed by those with such interests) can be effectively catalysed to form, and subsequently fostered.

Such a mechanism was created by GAMUT and proved to work as this author predicted (Curtis et al. 2008), with the capacity to foster the development of the communities of practice thereby brought together and given an effective neutral platform to further the governance and policy issues in planning and transport (Legacy et al. 2009). It depended on inviting key parties to speak in their personal capacity on the three key things that needed to be addressed to improve governance and policy, without any reference needed to specific polices or projects, past or present. It worked.

The placement of contestable evidence-based policy was succinctly framed as follows by the present author's presentation points.

- The levels of education and information access of the community have risen substantially, at the same time as the sharp growth in outsourcing of expertise from government. This demands a different model of community engagement.
- Evidence-based policy can all too easily fall into the UK disease of 'policy-led evidence' by carefully circumscribed briefs and even edited outcome reports.
- Consequently, contestable evidence-based policy is now needed, and is now possible due to the enhanced levels of education and technical capacities cited above.
- Information and analysis helps set the framework for the complex and rapidly changing interactive environments now upon us.

All of the above need to be addressed to secure a contestable basis to evidence-based policies (Wigan in Curtis et al. 2008).

There are still some steps missing between these points and operational action. The most important of these are:

- Can we communicate the complexity of planning and transport information in a form usable by wider communities, and in an affordable way?
- Data is one thing, but the majority of complex issues in planning and transport now demand models of various levels of complexity and sophistication to link the various outcomes together in a manageable, usable and understandable manner.

The data observatory movements that have sprung up in the US and the UK over the last few years suggest that the answer to the question in the first of these is 'yes'. The readers can test this for themselves at several of the operational websites cited in Wigan (2003), or at the specialised website set up at www.reorient.org.uk (Wigan et al. 2007).

Although many of the still-embryonic public access data observatories are restricted to graphical or mapping displays, or limited to cross tabulations for specialised subsets of certain types of data and usually under restrictive conditions of use[5], there are excellent exemplars that show that considerably more is genuinely possible and practicable. The global multimodal multi-commodity ETIS base of freight movements served by www.reorient.org.uk to www.worldnetproject.eu is a full-scale operational federated database[6] spread between countries that anyone can – and does – access as long as the NESSTAR license period lasts. In Australia , the VISTA7 database for Melbourne travel has recently come on line[7] and makes household travel directly accessible for partial visual analysis and display in a similar manner[8]. This is one of the emerging family of tools to support open data in government, the one being utilised in Victoria is a commercial product, but there is now an open-source version of the NESSTAR tools used by ReOrient and Worldnet, but not yet implemented there.

The next step required for contestable participation by a broader community is to add and integrate transport, planning and spatial projection models. Although this is gaining ground in some regions (notably Indonesia, with ADAB funding), it has yet to become widely implemented or accepted. It is a natural next step in providing the basis for

5 e.g., for transport road safety data see tight usage conditions set on the mapping and tabulation system at http://www.vicroads.vic.gov.au/Home/SafetyAndRules/AboutRoadSafety/StatisticsAndResearch/CrashStats.htm.

6 It uses the NESSTAR datacube and thematic mapping engine created for and by the UK Social Science Data Archive, and the Australian developed SAIC USA TeraText engine for documents.

7 Accessed at http://www5.transport.vic.gov.au/ista/

8 It uses the Australian developed SpaceTime Research SuperView tool http://www.spacetimeresearch.com/superview.html

contestability approaches to transport and planning governance.

Some of the barriers to this occurring are discussed in detail by Sunter and Wigan (2011), and pivot on reducing the barriers to entry and use presented by commercial or proprietary modelling systems by building on the open source software in the GIS, planning, transport and land-use domains.

CONCLUSIONS

This paper has addressed several, but not all, of the many barriers to the support and take-up of contestable evidence-based policy (CEBP) in planning. The combination of approaches and initiatives now requires major investment in the interworking of what are still largely incompatible sources of data types and requirements. Earlier work pinpointed the need for data discovery as a key component (Wigan et al. 2003) for the CEBP objective, and the need for Bayesian MCMC tools[9] to enable broadly incompatible data sets to be brought to bear on the same issues effectively (Westlake & Wigan 2007); but these are quite different, and essentially technical, issues and will not be pursued here, other than to recognise their importance and to indicate where at least some initial efforts have been made.

This paper has canvassed the requirements to position, support and operationalise a workable overall approach to evidence-based policy in planning and transport, and brought together a range of technical, theoretical and practical advances that can, and are, helping to inch all parties along this long and barrier-strewn way.

The development, codification and distribution of open source tools for analysis and visualisation, combined with the long delayed and now emergent open data moves by governments, are essential underpinnings for the growth of expert community engagement ('epistemic communities' being the term coming into use for this in some fields[10]), and the foundation for contestable evidence-based policy and broader community engagement.

The ideas and work discussed here build on a range of investigations over several years, and have been organised to support and expand on the thesis expressed by Wigan (2011):

> *Information governance in planning and transport needs to change for the community as a whole to be able to handle and respond to the complex issues now arising in transport and planning. The barriers include government control of basic public geospatial data, and the necessary changes in the mode of operation of government to secure these gains. If they are addressed, then the wider resources of the community can be harnessed, engagement improved, and responsiveness enabled.*
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> *These goals may not necessarily be seen to be in the interest of politicians, but are broadly a necessary and desirable change for the community, who increasingly owns and wishes to be engaged in transport and planning issues. Both contestability and transparency in governance are now needed even more if we are to manage and maintain costs, large-scale changes and the more and more probable and frequent major weather, social and resource disturbances.*
>
> *'The means to meet the need for information sharing at higher and continuing levels are no longer serious technical obstacles. Adaptations to governance have not yet followed, but the technical barriers are now much lower and the need greater. Inevitably, such continuing contestable evidence-based policy – and continuing adaptation – will meet its greatest resistance in governance arrangements, not because they are likely to ineffective – but because they probably will be.*
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> *These governance issues need to be addressed to enable us handle the transitions to sustainability in a timely and effective manner. The changes in governance and policy processes enabled by a contestable evidence-based policy framework to become possible are important, and a major potential contributor to transitions to sustainability in planning and transport.*
>
> *Emergent experience in this area also offers the opportunity to exchange the experiences as such models begin to emerge.*
>
> *Provision could profitably be made to develop an international network mechanism to enable, publicise, communicate, endorse and exchange such experiences. The complexity of the interacting long lead times required for policies in many areas of transport and planning now requires rapid information access, data management, operational experience and knowledge exchange enabled by such a new networked community of practice. (Wigan 2010)*

9 http://www.opus-project.org/. MCMC refers to 'Markov Chain Monte Carlo' methods

10 A very concise and lucid summary of this term and its relevance is given in Cunningham's discussion of Haas (1992) at http://www.people.fas.harvard.edu/~goodrich/IRnotes/Week12/Haas_summary.pdf.

To these we can now add that the initial stages of the changing governance enabled by taking contestability seriously includes:

- open forums where the diversity of views and evidence bases – and the trust and otherwise that they engender – can play a constructive and catalytic role, and
- the expansion of open source, open data and eGovernment initiatives.

Work has been reported on the former and started on the latter (Sunter & Wigan 2011).

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