Market or Market place?

Authors (* denotes corresponding author):

Dr. Raymond Bunker, Visiting Senior Research Fellow, City Future Research Centre, UNSW
(*) Mr. Andrew Tice, Senior Research Officer, City Future Research Centre, UNSW
Dr. Simon Pinnegar, Deputy Director, City Future Research Centre, UNSW

Contact details:

City Futures Research Centre,
Level 1, Red Centre West Wing
University of New South Wales,
Kensington, 2052
Telephone: 02 9385 5255
Email: a.tice@unsw.edu.au

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Abstract

The Australian urban form is increasingly becoming an inherently complex place in which to plan for. In part these complexities stem from the growing need to focus on existing locations that play their own distinct role within the urban milieu. In part this milieu is wrapped up in the world(s) of existing housing markets and sub-markets.

To illustrate these complexities this paper draws upon three projects exploring the social implications of compact cities espoused in the current metropolitan strategies, we explore the approaches employed and assess their success and limitations. This research has collected and analysed data and information at two levels. One has been through the analysis of Census data of the populations living in higher-density housing. The other source has been through rigorously structured surveys and interviews with such residents.

The paper attempts to practically engage with ongoing debates on the nature of urban analysis by examining the relationship between broad (sometimes aspatial) analysis and the complexities of the real world. In providing a critical assessment of our success (or otherwise) in reconciling the two, questions are raised regarding the potential dangers of conflation between identifying the segmentation of markets drivers over space and the spatiality of markets. In so doing issues of scale and geography come into play. Building upon this, the paper advances a more hybrid approach, one that melds housing submarket understanding with ongoing debates in spatial planning paradigms, to develop metropolitan planning functions.
Introduction

Housing market analysis has provided a rich cross-disciplinary battleground for the last couple of decades. Well-versed in the language of market understanding and operation, it is a battle that the urban economists have traditionally dominated. Geographers have also held a longstanding interest in the housing market, and the complex interplay that those markets reflect and respond to in terms of broader social, economic and urban dynamics. This rich debate has intensified in recent years, and the dialogue between constituent camps opened up to more nuanced debate. Much of this debate has focused on the spatial nature and operation of markets.

Two broad drivers can be cited for this strengthened interest in the role that geography potentially plays. The first reflects the wider recognition of the nature and outcomes of market dynamics. Internationally, housing ‘markets’ in advanced economies have demonstrated a complex tapestry of housing affordability constraint, social-spatial polarisation, hotspots, low demand, abandonment and – rather more rarely – steady, sustainable, balanced growth across a variety of scales. Different drivers leading to different outcomes have been met by housing and planning policies that are increasingly market-focused or market-centred in approach (Bramley et al, 2004; Cole and Nevin, 2004; Pinnegar, 2007). In part this linguistic shift towards ‘market-as-the-problem market-as-the-solution’ can be seen as a response to the increased dominance of neo-liberal politics. It is a response that has also been accompanied by an assumed shorthand as to what constitutes markets and market understanding – hence our engagement with the term in parentheses for much of this discussion. Nevertheless, this increased reliance has focused attention on the need to better understand how those ‘markets’ work, drilling down from macroeconomic considerations of supply and demand dynamics to sub-regional, local and indeed neighbourhood assessment.
The second captures the opportunities presented by advances in data collation, availability and technical capabilities for sharing information. Local level data, and platforms that demonstrate characteristics and trends within these data spatially, have opened up the possibility for economics-led analysis to engage with its nemesis – the noise created by geographical variability – in increasingly sophisticated ways (Bramley et al, 2008; Jones et al, 2004; Meen, 2005; 2009). Our understanding of characteristics and manifestations of local market dynamics has, visually at least, taken on a finer grain. However, how effective have we been in translating this into working with market dynamics at a more local scale? Do we remain tied to ecological fallacy and description pre-empted by the parameters and tools used to frame our analysis?

This paper presents a self-critique of the methodological journey taken by researchers in recent years. It is an interest which has evolved through a series of research projects focusing on higher density housing, urban consolidation and, most recently, housing supply/demand dynamics tied to the implementation of metropolitan planning strategies. From a geographical standpoint, our continued debate comes down to scale, and the spatial nature of the ‘markets’ and ‘submarkets’ we are seeking to identify, unravel and understand. Discussion has centred upon the concept of what we mean by the ‘market’, and the composition of the drivers of demand.

Influencing our negotiations has been the challenges of connecting metropolitan-wide and location-specific sources of data. As our approach has evolved, it has increasingly sought to reconcile data and information at two levels through the lens of higher density housing. One has been through the analysis of Census data of the populations living in this residential type. This has
been important in defining the kinds of households living in such housing. However, it tells us nothing about the perceptions, attitudes or expectations of such residents. The other has been through rigorously structured surveys of or interviews with such residents. However these are never more sufficient than indicative of the resident’s experiences, attitudes and behaviour.

However both kinds of analyses are crucial in testing some of the planning assumptions on which higher density compact cities are predicated. Integral to our methodological tribulations has been the challenge of how to more effectively connect these two levels of analysis so that they inform each other. This is particularly important in that macro-analysis favours a supply side approach to planning urban growth and change, and sociological-type surveys at the local level draw attention to more local drivers of demand.

In this paper, we outline the learning curve and progressive adjustments made in the research agenda to develop and a more appropriate methodology to start to rearticulate what we mean by markets, submarkets and the constituent elements shaping their dynamics. The next three sections provide a brief overview of key stages in the research progression, starting with a project to understand the drivers of urban consolidation in three LGAs in south and south-western Sydney. The second outlines research to identify the kinds of households living in higher-density housing across Sydney: whether they could be classified in any way and where they were living. The third discusses the results of attempts to reconcile our understanding of drivers at the macro- and local-scale through linking the geographies of increasingly sophisticated Factor analysis with the findings from survey-based research talking to higher-density occupants in Sydney and Melbourne.
The final section returns to our current work, and the unfolding development of a framework for a more iterative understanding of the drivers which shape local market activity. Raising questions concerning scale, and teasing out the vital distinction between the spatial nature of drivers which shape markets on the one hand and the spatiality of housing markets within which policy and interventions are ‘played out on the ground’ on the other.

The social functions provided by higher-density housing in three Sydney councils

The former Urban Frontiers Program at the University of Western Sydney\(^1\) carried out a research program in south and southwest Sydney funded by Campbelltown, Hurstville and Sutherland councils. The aim was to describe, analyse and interpret the processes of urban consolidation that had taken place in the three councils in the preceding twenty years. While a summary of some of the most important results was published (Bunker et al, 2002), the report to councils was a most comprehensive and detailed one. Eight case study areas had been chosen carefully where higher-density housing had replaced the previous dwelling stock in the last twenty years. A detailed time series analysis of these case study areas using Census data, and development application and building records found that ‘medium-density dwellings in the different locations studied, served at least five broad functions which overlapped to some extent’ (Urban Frontiers Program, 2000, pp. 169-170).

These were:

- accommodating migrants in the process of establishing themselves in Australia;
- housing elderly households moving from previous dwellings (usually separate houses) with capital and seeking convenient locations, security and low maintenance responsibilities;
accommodating elderly households who had spent much of their life in the locality and wished to remain there (ageing in place);

- housing new households finding a first home (often young couples); and

- Those providing low-cost housing for those on low incomes or in difficult circumstances.

While these results were important, they were arrived at by induction from changes in the population in the case study areas from 1981 to 1996. How typical were they? Did similar functions exist elsewhere in other locations of higher-density housing? Were there other important functions served by higher density housing? Were we simply describing processes shaped by locality rather than urban form?

**Factor analysis of households living in higher-density housing in Sydney**

It was decided by the research team to explore these questions by carrying out an analysis of Sydney households living in higher density housing. The approach selected had its theoretical foundation in past research that had indicated both the segmentation of housing ‘markets’ and their fragmentation over urban space (Randolph, 1991). This analysis was pursued for its methodological importance and indications that much of the higher-density housing to be built in Sydney in accordance with the metropolitan strategy *City of Cities* (Department of Planning, 2005) would be in areas of social stress and deprivation (Randolph, 2002, 2004; Randolph & Holloway, 2004, 2005).

Factor analysis was used to summarise the key characteristics into groups based on the interrelationship between them. The analysis was conducted on all households living in locations
characterised by concentrations of higher-density housing using the 2001 Census (over 80% of the stock mix comprising higher-density form). Six groupings were identified, in descending order of definition:

- Suburban low-income, rental, immigrant;
- Higher-income, high amenity inner city;
- Generation X rental and home purchase;
- Higher-density public housing;
- Semi-detached dwellings;
- Medium density public rental.

The detailed results of this analysis have been fully reported elsewhere (Bunker et al. 2005a, 2005b), however of interest in the context of this paper are the insights provided through the method employed and the further questions arising. While each of the groupings, when mapped, illustrated fragmented patterns around the metropolitan area with some concentrations indicative of the titles given to them, these spatial patterns alone indicate little more than a static pattern of property utilisation. They cannot be read as defacto ‘markets’ as nothing is known about how they came into being.

Coupled with this it should also be pointed out that, aside from a few locations where higher-density is the dominate mode, there is the distinct possibility that the analysis included extraneous profile information from those living in lower-density configurations surrounding and intersecting the higher-density configurations. To this end the methodology, to a certain extent, fell foul of the ecological fallacy. Further, the attempt to suppress this issue (by only focusing on locations with a
high percentage of higher-density properties) in itself excluded a large component of the population under analysis from the research. Could it not be possible that other profiles of utilisation existed in other locations?

**Characteristics of households living in higher-density housing in Sydney and Melbourne**

The next stage in our journey extended this analysis across Sydney and Melbourne. The aims of this third piece of research were twofold:

1. Mindful of the previous issues concerning the inclusion of extraneous characteristics in the Factor Analysis it was decided that a further iteration should concentrate *purely* on households in higher-density housing. To facilitate this, and via discussions with the ABS, it was discovered that commissioned tables could be filtered to specifically contain only those living in flats and apartments. This, in itself, was a worthwhile exercise as it both served to focus profiling activity and also broaden the geography across the entirety of the metropolitan area;

2. Structure and deploy a statistically robust survey to provide information on actual experience, behaviour and expectations of residents in higher-density configurations. Essentially providing the functionality of research that couldn’t be derived from the utilisation of the Census alone.

As stated, the Census data was filtered to only contain people living in flats, units or apartments (in other words a defacto Census in its own right), coupled with this households renting public housing were also excluded as the analysis sought to identify the choices and trade-offs made by households either buying dwellings or renting them from the private sector.
As with the earlier factor analysis the results explained a high percentage of the variation within the dataset. The groupings of households resulting from the factor analysis, again in order of definition were called:

- **Economically Engaged** - Single and Dual income earning households, mainly in their late 20’s to early 30’s. Their employment profile was mainly characterised by higher-order occupation. 63% were renting and 25% purchasing;

- **Battlers** - Mainly family households, with children. Lower household income (with a predominance of only single incomes), with 12% in unemployment. Occupational this group was characterised by blue-collar and lower order service sector positions. Renting was the primary tenure (62%), although purchasing also figured highly (24%);

- **Achieving Education** - Young adults, either in full time education, or just completing, highest levels of private renting (78%) and group sharing (23%);

- **Residentially Retired** - Older property owners, both affluent and also low income profiles present. Over half (57%) were comprised of lone person households. Highest level of outright ownership (37%), although 47% were renting;

- **Apartment Elite** - High income earners (37% earning in excess of $2,500 per week), usually couples in their late 30’s and older. Whilst 23% owned their properties outright over half were still in engaged in private renting.

While this was the combined result for both cities, there were important differences between the two as shown in Figure 1. In Sydney the two dominant factor groupings are ‘battlers’ and the ‘apartment elite’, whereas in Melbourne they are ‘achieving education’ and ‘residentially retired.'
This, in itself, was an interesting finding. Even at the level of the City there is evidence that the profile of the population utilising flats and apartments is structured in distinctly different ways; indicatively this difference in structure will, in part, drive and shape the characteristics of neighbourhoods and suburbs that are dominated by flat development. Coupled with this, it is also pertinent to note that the Economically Engaged group (typically single and couple households working in higher order, mainly tertiary sector, employment) who are the archetypal assumed household demand for such flatted development comprise less than a quarter (24% in Sydney and 22% in Melbourne) of the overall profile. The demand for flatted accommodation, or at least the utilisation of it, is dominated by a wide range of other household forms.

Coupled with this wider complexity of demand structures observed at the level of the city, our analysis demonstrated that these structures themselves demonstrate distinct spatial patterns within the cities. Figure 2 maps out Collector District (CD) geography of locations returning high Factor loadings for two of the groups identified (Battlers and Apartment Elite). At this scale it is evident that the two groups exhibit, by and large, distinct geographies with the Apartment Elite clustered around the harbour and the Battler group in the middle and outer west. In large part this is not particularly surprising as one of the key differences between these groups is the level of household income (with the Apartment Elite, on average, having an income some 4 to 5 times greater than the Battlers) and the geography illustrated is a residual of both rental and overall house price costs. However there are instances – all be they limited – of the Apartment Elite group in locations neighbouring Battler populations, perhaps suggesting that the geography is not as clear cut as all that.
Subsequent examination of the scoring loads of the Factor analysis at the CD level indicated that there was a substantial overlap of robustly scoring factors within CDs. This indicates that the limited horizontal neighbouring identified previously may well exist in a vertical form as well; in other words distinct within locations or across a broader neighbourhood profile. Table one presents this finding by quantifying the size of the percentage of the total flat dwelling population (for both cities). While almost two-thirds (61%) of the population lived in locations that could only be classified by a single factor profile, 10% of the population lived in locations characterised by the presence of four of the factor groups (no location returned a statistically robust score for all five, however).

Figure 3 demonstrates this interplay of Factors. The diagram is constructed from a selection of CDs that comprise Pyrmont Ultimo. This part of Sydney, located just to the west of the CBD and to the north of two universities, has seen substantial apartment development over the last fifteen years. While the Economically Active group has a strong presence in the suburb, the Achieving Education group (students) makes use of the suburb as well. There is also an incidence of lower income households (Battlers) in two locations.
Reconciling space with perceptions

The methodology so far had evidenced that underneath broad classifications of higher-density utilisation laid a multiplicity of potential configurations. However, this form of large scale quantitative analysis sheds little light on why these configurations occurred or whether the experiences of those living in higher-density differed substantially. The second component of this ARC-funded research involved 1597 interviews, with selected residents chosen according to whether they were located in the inner, middle or outer zones (based on the proximity of the Local Government Area geography (LGA) to the LGA containing the Central Business District) of the two cities. After the interviews they were allocated to the most appropriate factor grouping in order to connect the two levels of analysis. The interviews were quite comprehensive and designed to ascertain, among other matters, their preferences as to dwelling type; criteria for selecting their present home; degree of satisfaction or dissatisfaction with the dwelling; comments on the management and maintenance; community activities and friendship patterns; adequacy of design and open space; future intentions regarding housing; and travel characteristics.

The chosen methodology for this exercise was based on a CHAID analysis model. The process attempted to divide questions from the surveys based on both reasons for apartment choice and also satisfaction with apartment living across the factor profiles to discover whether different groups had substantially different demand and utilisation profiles. The exercise was, largely, unsuccessful in identifying any differences between the five profiles, with the exception of the predictive power of variables specific to individual factors; for example accessibility to tertiary education was of key importance to the Achieving Education group and Childcare was important for the Battler subset. To validate this finding, the CHAID analysis was re-run with the Factor
variable removed. This served to reiterate the finding that certain groups within the overall population expressed a mode of choice based on proximity to certain location based services. Therefore the only benefit afforded by the inclusion of the Factor variable was the ability to identify who these certain groups expressing these choices were.

Outside of these location specifics, the CHAID analysis couldn’t be used to define any individually particular mode of utilisation or selection profile; in other words despite of distinct socio-economic profile differences (the Factors) these profiles, on the whole, reflected a commonality of both housing choice and also satisfaction. There are numerous reasons why this might be the case. Potentially the sample frame of the survey was too small to draw out the multiplicity of reasons for selecting higher-density housing: if a larger sample frame had been used would this have afforded the ability to identify distinct selection profiles? Another possible influencing factor was that the population surveyed was already residents of high-density housing and thus statements of both choice and satisfaction could be being influenced by a certain level of post-hoc rationalisation; the majority of households rationalise choice and satisfaction in a positive manner, unless their position is severely constrained. There is a wealth of literature on the difficulties of aligning housing choice processes, see for example Timmermans (1994) for a review of methodologies. The underlying influence of location cannot be under-estimated and it is this influence that has some resonance in the replies with our understandings of urban structure, travel behaviour and choices of location and dwelling type by different kinds of households.
Housing sub-markets in implementing metropolitan strategies

The more nearly perfect a market is, the stronger is the tendency for the same price to be paid for the same thing at the same time in all parts of the market; but of course the market is large, allowance must be made for expense of delivering the goods to different purchasers, each of whom must be supposed to pay addition to the market price a special charge on account of delivery (Marshall, 1961, p.325).

Collectively, the outcomes of the three research projects discussed above have greatly increased our understanding of the nature, and geography, of drivers of demand across metropolitan areas. The analysis has presented an insightful, detailed understanding of the factors shaping the nature of markets across space. We know the core characteristics of groups shaping demand profiles in particular parts of the city, although the disjuncture experienced in the hoped for reconciliation between macro- and local-level analyses highlights the limitations faced. It has not resolved tensions regarding how the term ‘market’ is enrolled, nor unravelled the difficulties arising from use of the term as a description both for the function of housing utilisation, as well as shorthand for the bounded spatial distribution of such utilisation.

In part, this difficulty arises due to the fact that the product itself (housing) tends to be a spatially fixed item; properties in themselves define their own place within their market, and similar products attract markedly different prices due to locational factors. While not entirely a question of ‘garbage in, garbage out’, the techniques used to explore and explain segmentation can consolidate confusion. There has been considerable debate as to whether submarkets are best understood (if they are significant at all) in spatially contiguous or discontiguous terms (Bunker et al, 2005; Randolph, 1991). To a large degree, the debates held within the team reflect matters of language and discourse. They have also revolved around contestations about what market analysis actually provides and its contribution to broader urban and planning considerations.
In this regard we have engaged with the rich spatial discourse in the submarkets literature (Badcock, 1976; Bourassa et al, 2003; Galster, 1987, 1996, 2001; Goodman and Thibodeau, 2003; Maclennan and Tu, 1996). This has not translated into conceptualising localised markets as separate and operating in different ways to the broader context (as demonstrated with the multiple layers that can fold together in the most recent iteration of our factor analysis segmentation of higher density housing). Rather, our interest has increasingly focused on interaction across spatial scales in terms of the ways in which differential trajectories of segmentation and market disequilibrium affect different parts of that wider market over time (Bramley et al, 2008).

As such, analytical techniques have helped capture the ‘multiplex’ or ‘jigsaw’ nature of our cities (Graham and Healey, 1999; Power and Houghton, 2007). However, how we take forward that analysis and understand those markets acknowledges the difference that space makes, and points towards a favourable disposition to Bourassa et al’s conclusion that ‘not only do submarkets matter, but geography also matters.’ A number of drivers underpin recognition of the importance of, and commitment to, geography. The first is simply because economic modelling approaches have struggled to address spatial considerations adequately. Secondly, characteristics of market inefficiency point towards the importance of location factors where the socioeconomic characteristics of neighbourhoods have a significant impact on markets alongside dwelling size, type, quality. The third is a commitment to policy relevance. If planners are to use the outcomes of such analysis to and understand the complex interface between policy and market response, then the research needs to have relevance in terms of how we understand, govern and can potentially intervene in our cities.
Conclusion

The focus of the research discussed above has been on higher-density configurations of residential developments in the Australian (and mainly Sydney) context. Arguably, understanding the nature, drivers and outcomes of these urban forms is central to the viability and success of growth and renewal in Australia’s cities over the next generation. Strata development made up 37% of Sydney’s overall residential provision in 2001, and 42% by 2006. This upward trend will continue. Considered another way, the once flattened structures of Australian suburban morphology is increasingly being forced and folded back over itself. Household structures and compositions (and all their related demands and aspirations) that once might have existed in distinct spatial distributions several kilometres from each other are now increasingly structured in a multiplicity of intersecting layers (or, indeed, strata).

Whilst the methodological approaches discussed in this paper have gone some way to approach this structuring, and at least shed some light on mode, they also raise as many questions as answers. The increasing complexity inherent in the processes layering these markets is in part a mix of economic, geographical, historical and sociological drivers (with a little bit of politics thrown in for good measure) with housing as the site – a site with geographical context – where these processes intersect. It can be argued that there is a need to value the contribution made by this increasingly sophisticated submarket analysis, but also to move beyond clever segmentation as a means to reconcile macro- and local market drivers to recognise the limits of that contribution to how we understand and may respond in urban policy terms. In the context of property valuation, Bourassa et al highlight that extensively complex modelling exercises yield little extra value in explaining spatial differences in property valuation. They conclusion is that processes, such as
Factor analysis may be best suited “…in combining small geographical areas into larger areas for more basic research on the internal structure of cities.” (Bourassa et al, 2003, p.27).

This position appears to echo urban system studies of the 1960s and early 1970s that utilised Factor Ecology process to describe structure (for example Berry and Horton (1970) provide a whole chapter on such methodologies). Whilst the working methods outlined in this paper haven’t advanced these actual processes substantially\textsuperscript{vi}, aside from the insertion of a more overt, ‘accessible’ spatial form via the application of Geographical Information System processes, there would appear to be some merit in embracing the complexity they (re) introduce into the debate.

However, such echoes do not necessarily translate into endorsing a return to an urban systems paradigm. This has long since moved on to be replaced by the relational structures of a “complex layering of multiple social relations each with its own space-time dynamics and scalar reach” (Healey, 2007, p.224). The case that is being advanced is that the structures put forward by the Factor analysis are a manifestation of just one facet of this complex layering, namely utilisation of housing.

This methodological reappraisal of how housing – and housing ‘markets’ – sit within increasingly complex urban structures has received increased attention, mainly in the field of housing economics (Adams et al., 1995; Guy & Henneberry, 2002, Kauko, 2001; Watkins, 2008), where discussion seeks to site economic modelling practices within a growing complexity of other academic disciplines. Watkins borrows Susan Haack’s ‘crossword puzzle analogy’ to provide structure to these processes, suggesting that “…knowledge [of structure, and function], which
might have been developed from a variety of different methods, should be used (abducted) as if solving mutually reinforcing clues’ (Watkins, 2008 p. 172).

Within this broader framework, we become all too aware of the limitations reflected in our methodological journey: not necessarily in terms of the processes employed or our application of them, but rather the assumptions made that those processes can provide a robust means of drawing together macro- and local understandings of the market, and furthermore, the role that space plays. The use of the spatial Factor Analysis approach could be seen as being akin to the structuring of the crossword puzzle frame into which the researchers attempted to reconcile answers (findings from the survey) constructed for a different puzzle. Instead, the structuring of the frame itself could provide the means to shape and analyse the methods by which the mutually reinforcing clues could be tackled. Innovation rests in rearticulating an understanding of the spatiality of housing markets somewhat flattened and dismantled by economic modelling approaches in isolation (and here the term market appears without parentheses). It points to the kind of socio-economic approach associated with the seminal work of Rex and Moore in 1967, and as Smith et al. argue “it is no longer outrageous to think that a more qualitative, sociological and anthropological take on context, consumption, value and affect might be poised to engage with housing economics to a hitherto unprecedented extent” (2006, p. 95).

Our current research focuses on the practical development of approaches that seek reconciliation between urban economics and society, and recognise the existence of ‘cultural economy’ (Amin and Thrift, 2003, Callon, 1998, du Gay and Pryke, 2002). Yates and Whitehead (1998) note that housing market imperfections ensure that economic models simply find the demand side of the
equation ‘too hard’, and as such, a degree of agnosticism is required. The recent work of Susan Smith, which considers how markets are made, who is involved and their consequences, rather than simply their operation, is particularly important in this regard (Smith et al, 2006; Smith and Munro, 2008). Increased engagement at the housing market-policy interface also points towards a suite of tools which “open up markets to scrutiny from a range of social science perspectives within and beyond mainstream economics” (Smith and Munro, 2008, p. 159).

However these tools remain hard to conceptualise. In part, one suggestion is that the selection of the tools is mutually dependant on both the location(s) under analysis (the spatiality of the crossword grid) and also the context of the analysis itself (housing affordability is not merely an issue of house prices, for example). The structuring of the nature, role and function of locations (their multifaceted intrinsic geography within Healey’s “complex layering” in combination with the manner in which separate socio-economic groupings navigate this) is one approach in which to at least structure the tool-box into which the suites of tools can be stored.

Finally, returning to the issues of scale raised at the beginning of this paper just at what level do “markets” and thus “market-orientated” working practices need to operate at to make sense of this complexity? One suggestion is that it is at whatever scales the information resources facilitate; this suggestion the heart of the pragmatic philosophical espoused by Susan Haack and resonated by Watkins. In such an approach the tool-box could be a bridging mechanism(s) to facilitate the “reading-up” of micro level data into its broader socio-spatial context as much as it is the “reading-down” of macro level data. Research into this is being commenced on by the authors as part of a new ARC Linkage grant with the NSW Department of Planning and Landcom.
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