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KNOWLEDGES FOR JUST URBAN SUSTAINABILITY

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Abstract

The article examines the conditions required for producing knowledge for just urban sustainability. It highlights a need to review the current social organisation of knowledge within cities and the implications for academic practice – in other words, whose interests are being served? Whose knowledge claims are being supported and justified? The article considers how the knowledge practices of cities and universities often exacerbate urban problems that are perpetuated by a limited imaginary and selectivity. It is argued that a gap exists between the content of knowledge and the context of its application. What is required are new ways of practicing collaborative research that do not compromise critique, but open it up to engagement with forms of knowledge that are currently excluded from the representations and categorizations that constitute dominant practices. By bringing the 'what' and 'how' of knowledge together in a process of active intermediation it is possible to contribute to more just, sustainable urban futures for the many, not the few.

Introduction

Urban areas benefit from density and agglomeration; they also create pollution and in the face of massive wealth inequalities are sites of heightened social injustice (Fainstein 2010). In considering these problems and their solutions, knowledge is accorded a central role. Cities around the globe are seeking to harness the power of knowledge to create science and smart cities, urban innovation platforms, or urban technopoles to develop new visions upon which to base their plans and strategies (Miao et al 2015; Perry and May 2015a). They seek the ingredients for success as if recipes existed for the achievements of growth, justice and sustainable development and models circulate across contexts. Despite this, the processes of urban knowledge production remain under-researched areas in terms of understanding the expectations that are placed upon forms of knowledge and their relationship to actions (May 2011; May and Perry 2016). What we find is a tendency to prioritise particular kinds of expertise in urban development that bolsters a 'business as usual' approach to economic growth (Meadows et al 1972), rather than recognize different forms of knowledges and practice to engage with justice (Agyeman 2013). All of this takes place against a background of massive inequalities that has consequences for us all (Dorling 2014; Di Muzio 2015).

Those analyzing the dominant modes of framing issues often turn to the ways in which economic globalization affects local governance and transforms the everyday texture of the urban form (Brenner 2014). Policy literatures highlight an implementation gap between policy and practice in which top-down approaches are not context-sensitive requiring a more nuanced 'building blocks' approach (Carr and Affolderbach 2014; Falkner, Stephan and Vogler 2011; Lawhon and Patel 2013). In populating a space in which knowledge is produced, transmitted, interpreted and acted upon, we find the contested and changing forms of the nation state, citizenship and nationalism; the enhanced role of supra-national bodies;

natural resource depletion; increased power of multi-national corporations and the super-rich; democratic deficits; relations between knowledge, power and action and a retrenching of social inequalities within and between societies across the globe.

A core task of this article is to examine the dynamics that perpetuate dominant knowledge architectures in cities in order to inform alternative responses (Marcuse et al 2011). For this purpose the article is divided into the following sections. First, there is an examination of how particular views of knowledge and urban development are perpetuated. In the process, an identification of the parallels between government, business and universities are highlighted (Pinheiro et al 2013). Through considering these processes of reproduction, we find contemporary pressures on cities and universities, as major sites of knowledge production, coming from neoliberal forms of capitalism that shape aspirations and expectations of knowledge. One result is the separation of the economic and ecological from the social through the bounding of 'environmental' knowledge (Koch 2012; Lave 2012; 2015). This, we argue, occurs through an alignment between the desire for global excellence among universities and competitive relevance in cities that combines with a 'sectorsemia' that bound practices in particular ways.

Second, how these practices are perpetuated needs to be built into the formulation of alternatives. In particular, what is missing is an understanding of knowledge practices that can contribute to context-sensitive critique in order to assist the development of alternative forms of sustainable urbanism. We draw attention to the need to tackle a series of 'devilish dichotomies' through a process of 'active intermediation'. That entails the enlargement of voices that are frequently excluded from deliberations (May with Perry 2011; Perry and May 2010; Perry et al 2013). Throughout the article, we deploy the idea of sustainable development and justice as meeting the needs of present generations without compromising

the needs of those in the future, improvements in life and well being and equity through both process and outcome (Agyeman 2013).

Diversity and Conformity: Knowledge Cities and Inequality

Cities seek symbolic advantage in a climate governed by neoliberal beliefs in free markets. Universities, as major sites of knowledge production, are not immune to these pressures. Forms of knowledge feed these desires with a resulting de-politicization based upon a belief in particular solutions. Such is the power of global, neoliberal ideology it has been characterized as 'belief in belief' (Žižek 2009). The promise of the knowledge economy, for example, constitutes a future state in which concern for present maladies may be suspended in the name of idealised futures based upon the promulgation of particular economic value (May and Perry 2017a). In this climate, universities seek global recognition whereby contexts are readily denigrated through a prioritisation of the content through global circulation of knowledge. Those within universities often provide the rationale that perpetuates this cycle with one result being that the importance of interaction and engagement with localities and communities for the purpose of enhancing social justice becomes a secondary matter. The imaginaries of neoliberalism (Cameron and Palan 2004) render urban contexts that do not conform to the ideal as spaces for transformation, not places whose values are recognised, deliberated upon and included.

Against this background debates on urban development take into account the dynamics of resource constraint and low carbon transitions, urban sprawl, poverty and the knowledge-based economy. Cities are represented as being a significant part of the 'cause' of climate change - with some estimates attributing up to 75 per cent of global human energy consumption and carbon emissions to urban areas – and its 'victims', particularly the megacities of the global South (Bulkeley et al. 2010). In different sub-national contexts,

knowledge is accorded a central role in achieving growth and competitiveness with the role of cities framed through the lenses of enhanced innovation, skills and creativity (Marceau 2008). Technologies, in particular, are often embraced as panaceas to problems: for example, in increasing building efficiencies, providing new information technology platforms; creating new energy sources for urban transport and the management of urban populations in terms of flows and energy use.

What is absent from consideration are the socio-technical and politico-ecological contexts of such developments and the institutional, social and spatial influences on what knowledge is taken up and deployed. In respect to Cape Town: "Developments must remain sensitive to the area's history, heritage, natural environment and distinctive character, and the rights and needs of poorer communities" (Boraine 2010: 115). Yet despite calls to context-sensitivity, the promise that informs these developments focuses upon obtaining competitive advantage mobilised in the idea of the 'information economy' (Drennan 2002) whose elaborations have included attracting a 'creative class' (Florida 2002) to cities within the growth of 'cognitive capitalism' (Boutang 2011). These feed the search for competitive relevance manifest in indicators of urban success. Here, the emphasis is upon application of knowledge to strategic priorities as a precondition for global success. Context then tends to evaporate in favour of an exemplary politics that privileges the exemplar: a transferable model in a marketplace of ideas. The result is a: "nexus of media, public opinion and portable urban policy oriented around the competitive threat from other cities, and a discursive uniformity of intuitive urban comparability" (Gleeson 2014: 368).

Heralded as a development equal in importance to the industrial revolution of the 19th century (Castells and Hall 1994), the knowledge economy is characterised by an increasing volume of workers involved in distributing, processing and producing knowledge, along with

the percentage of GNP and salaries to specific business sectors, signified the coming of the 'information age' (Bell 1980). The causes of these changes are attributed to: globalisation; proliferation of high-tech industries; expansion of the scientific base; movement from manufacturing to a service-based economy; new information technologies and accelerated technological changes (Neef 1998). Its starting point is recognition that knowledge was a source of competitive advantage and is manifest in the idea of the 'smart or 'science' city (Perry and May 2015a). Building 'high value added' economies, characterised by high wages, employment and skills and the deployment of technological advances to monitor, record and intervene in urban systems, is a priority. Whilst knowledge has always played an important role in human activities (Stehr 1992), its quantity, complexity and speed marks this new phase in development (De Weert 1999) and the search is on to build 'cities of knowledge' (O'Mara 2005; Ahmed and Alfaki 2016).

The promise of the knowledge economy permeates policy discourses as one of continual possibility. Evidence suggests that the main mechanism for economic convergence at domestic and international levels is the diffusion of knowledge and further, that depends on: "a country's ability to mobilize financing as well as institutions that encourage large-scale investment in education and training of the population while guaranteeing a stable legal framework that various economics actors can reliably count on" (Piketty 2014: 71). The primary importance of knowledge as the resource, rather than a resource, is seen to lead to a post-capitalist society that fundamentally changes the structure of society, the economy and political worlds (Drucker 2011). Knowledge as a process, product and way of informing meanings and interpretations in the world plays a pivotal role. The context of these interpretations, however, takes places within a landscape in which the content of knowledge in terms of its attribution to talent, expertise, development and recognition of assets,

exemplary projects and general symbols of success and marketing, become the main focus. Knowledge becomes a tool for global urban positioning in search of distinction and underlying these strategies is an idea of particular cities being clever, smart, skilful, creative, adaptive, networked, connected and above all, competitive.

Underpinning the production of these views of urban futures are dominant social interests. The effect is to frame the challenges of cites in very particular ways. A focus, for example, on slums and the urban poor as a problem, rather than a more nuanced reading that exposes the limitations of the epistemological lenses deployed for such purposes, leads to a de-politicising of issues (Pieterse 2008). A drive towards global conformity focuses upon the exemplar on the international stage: that is, the replicable model that can be transferred from place to place through coalitions of interests in which attributed value regards issues of contextual implementation as inconveniences measured against a willingness to become 'innovative'. 'Siliconisation' has thus reached the Silicon Alps (Austria), the Silicon Tundra (Canada), Silicon Fen (England) and Silicon Polder (Netherlands) (Koepp 2002). An instrumentally-driven, econo-centric perspective on urban development consumes strategies as these 'Silicon Somewheres' (Hospers 2006) seek to make real these 'high-tech fantasies' (Massey et al 1992). More socially-inclusive, just and holistic practices fall victim in an intertwining of epistemological framing and desire.

A consequence of this search for 'cognitive accumulation' (Paulré 2010) is that the city becomes a site of conflict where a 'grudging tolerance' parallels the 'fragmentation of territories' (Banerjee-Guha 2010). Researchers often turn to the circulation of global capital for explanations for this state of affairs. A neoliberal project is: "masked by a lot of rhetoric about individual freedom, liberty, personal responsibility and the virtues of privatisation, the free market and free trade" (Harvey 2010: 10). Traditional attachments may be maintained in

the face of these pressures, but also re-contextualized and re-embedded with the influence of communities, corporations and international governmental organizations producing new agendas and challenges (Turner 2006). 'Citizenship' and 'rights' are contested under the commanding influences of powerful organizations (Crouch 2011). Deliberative, democratic urban spaces concerning present problems and possible futures are easily filled by the frenetic search for competitive advantage or through the construction of frames of representation to the exclusion of consideration of those who benefit from an unjust state of affairs (Sayer 2015).

Cities become sites of experimentation in which 'exemplars' emerge to represent best practice. Rationales for addressing climate change or reconfiguring infrastructures stem not only from imperatives framed in terms of expected economic benefit, but from the enhanced symbolic value that comes from being an 'innovative' city. Smart City Lyon combines the technological (smart) with the ecological (efficient) to produce greater opportunities for inward investment and business development (Only Lyon 2014). Competition between cities is bound up with the attributed benefits that come from being seen at the forefront of developments in global times. The result is that market-produced value readily becomes a surrogate for the value of the environment and displaces other values that constitute the basis of social life (Krueger and Gibbs 2007; Graeber 2001). In global struggles for recognition, there is a seeking of status as eco-cities, science cities or knowledge capitals with associated value attributed to world-class universities, yet with little understanding of what values are selected and for whose benefit (May and Perry 2006)? It is no wonder that those concerned with alternatives write that neoliberal elites should not be "able to exploit the urban future as a basis for contributing to the metropolitan present" (Whitehead 2013: 1364)

We do not argue that the ecological or economic is a separate domain from the social in debates on urban justice (Koch 2012). Yet this separation is reinforced through epistemic framings that bracket social worlds and relegate poorer urban communities to afterthoughts in the search for new urban imaginaries. What plagues urban knowledge and policy is a 'sectorsemia' exemplified in organizational demarcation and specialisation that limits a relational understanding through limited framing. Domains of knowledge and practice delimit the extent to which coherent articulations of the just city can be voiced (see this issue). Whilst the complexity of the world requires degrees of bracketing, it is the dominant form through which this is produced, what is excluded and its effects that we are subjecting to critique (May and Perry 2017b). Epistemic hierarchies exist, in which knowledge for understanding is valued less than the attributed value of commercially-exploitable outputs, models of urban economic growth and the desire for global recognition.

To tackle such issues it is necessary to not only consider the 'urban' in terms of control, democracy and responsibility, but also the representation of places and issues and that is a challenge to expertise in terms of practices of justification and legislating over particular areas of knowledge. It is also a challenge to the coalitions of interests, that includes universities and business and political elites, which seek global status for their cities. These formulations assume a coherent entity into which is poured the perpetuation of growth through a denial of 'causal responsibility' (Garvey 2008). A view of knowledge that assumes linearity, products, outputs and patents, or an economic view extracted from the social, cultural and political, will not result in improvements in our cities because these atomised views have no relational understanding and simply exacerbate and displace problems.

Universities and Urban Knowledge Production: Seeking Alternatives

In seeking alternatives we turn to a major site of knowledge production: the university. We do not assume a monopoly here and note the role of consultancies and think tanks, but clear changes are needed in how these institutions operate because we find uneasy parallels in practices where they are often assumed to be different (May and Perry 2013a). These organisations and their personnel are caught in these trends, subject to similar pressures and seek prestige in international league tables and perpetuate particular 'fixes' to issues identified as problems without sensitivity to context (Perry and May 2011; Benneworth 2013). Whilst changeable dynamics between the justification and the application of knowledge have been seen as leading to 'contextualisation' of a more socially accountable science, intrinsically linked to enhanced reflexivity on the part of the researcher (Nowotny et al 2001), this characterisation does not accord with our evidence. However, context sensitivity and the importance of reflexivity in relation to better forms of democracy that include a realistic appraisal of what knowledge can and cannot achieve, do point to the need to re-examine the relationship between the content and context of knowledge production in contemporary society (May with Perry 2011).

Issues of institutional, spatial or socio-political contexts have often not been considered relevant factors in discussions on urban knowledge production. It is perfectly possible to produce insightful discussions concerning epistemic cultures, but say relatively little about the institutional conditions, vis-à-vis the university and its environment, which shape the attribution of value to different knowledges (Knorr-Cetina 1999). Equally, within the science, technology and society (STS) community, a situation can appear where context becomes everything, leading to a relativisation of knowledge claims the result of which is to collapse the justification for knowledge solely into the context of its discovery (Norris 2014).

Such moves do little to engage with the possibility of transformation the face of contemporary pressures and understanding how particular forms of knowledge are taken up and translated in different contexts according to its content, evaporates. Preoccupations focus on either micro-level analyses of processes of knowledge production, or on content without consideration of <u>what</u> knowledge is produced and <u>how</u> its reception is shaped and informed by the forces shaping particular trajectories of development. A series of 'devilish dichotomies' between the pursuit of excellence and relevance inform current situations (Perry and May 2010). In the case of the former, aspatial views of knowledge prevail, whilst in the latter, a relative view prevails leading to questions concerning learning and comparison.

In the face of these issues developments are keen to assert their transformative, rather than affirmative potential. Living labs, new urban prototypes and initiatives as different ways of organising knowledge, suggest a role for the university as social transformer and 'co-creator' of knowledge (Trencher et al 2014a). The Public Laboratory for Open Technology and Science, created by a consortium of activists and academics in 2010 in response to the Deep Water Horizon oil spill (Lave 2015: 250) or the Oberlin project in Ohio, US, are seen as a 'full spectrum sustainability' experiment (Orr 2011, in Trencher et al 2014a). More recent actors include Mistra Urban Futures which is underpinned by a combination between the 'what' and 'how' or knowledge through 'local interaction platforms' in Sweden, South Africa, Kenya and the UK where knowledge is co-produced with partners (Mistra Urban Futures 2015).

A reasonable concern exists that the same politics which we have charted can cloud these initiatives. Universities, after all, play the green league tables to gain competitive advantage through showing their ecological prowess. A large scale international survey of university partnerships for sustainability in 2014 revealed a bias towards technical

approaches, the privileging of particular fields such as engineering and the natural sciences and the limitations imposed by traditional academic norms and values (Trencher et al 2014b). A focus on ecological-technical developments, with less emphasis on the integration of alternative forms of expertise from community groups normally excluded from consideration, can easily reflect dominant trends.

Those considerations points to a need for greater reflexive concern about urban knowledge and expertise (May and Perry 2013b) and how that perpetuates the current situation. These are perhaps even more important than "the ways in which knowledge is vetted and the questions investigated (or ignored) shift" (Lave 2015: 244). Often framed as a global challenge the ecological crisis, for instance, is manifest at a local level requiring a continual dialogue between 'local-global' and 'epistemic-normative' dimensions "in order to restore local voices and experiences into the distanced discourse of climate change" (Carrozza 2014: 116). Seeking to convince a global community of China's carbon credentials, for example, does not work locally because it ignores the conditions for those living in communities (May, S. 2011). Low carbon laboratories also run the risk of deepening and enhancing existing modes of governance shaping the city, whilst practices of science may be "politics by another means" (Evans and Karvonen 2014: 426. Karvonen et al 2014). Sectorsemia, the desire to be seen as an expert and the epistemic frames of disciplines can easily combine to reinforce boundaries and displace problems: for example, that there is such a discrete thing as 'environmental' knowledge as opposed to other forms of knowledge and expertise that are needed for more just urban futures. A consequence is that the same neoliberal dynamics they may seek to transcend are perpetuated through practices that replicate urban politics and knowledge pathways maintaining the status quo (Naess 2010).

Active Intermediation

The politics of knowledge and the city tends to attribute possibility to particular forms of knowledge. The pursuit of excellence in universities mirrors the competitive relevance pursued by cities and casualties are excluded voices and the importance of place. Academic pre-occupations with relativism and relevance have their effects upon occupational cultures of knowledge production and another casualty here is learning concerning the relations between content and context. As cities shape urban research, so research shapes cities (May and Perry 2011). Equally, city officials practice anticipatory decision-making: that is, fear of having no voice or influence unless conforming to dominant priorities and we see the same anticipatory decision-making in the struggles for recognition among peers in academia. These practices of epistemic framing, in both academia and the city, are born of a distance, not acquaintance. Understanding values, the relations between knowledge and practice and how and why particular issues come into the framing of urban processes and problems, are left in the wake of these practices. Resulting forms of categorization of populations and urban issues are left unquestioned and whole sets of practices denied: "scientific discourse misses the fact that the ability to deny is an amazing human phenomenon, largely unexplained and often inexplicable, a product of the sheer complexity of our emotional, linguistic, moral and intellectual lives" (Cohen 2001: 50).

A gap remains between policy discourses and more socialised forms of knowledge-sharing through open deliberation, understanding and populating alternative visions for the future. Whilst we see the popularity of texts on being a 'reflective practitioner' and the 'knowing-doing gap' in organizations (for example, see Pfeffer and Sutton 2000; Schon 1991), we see very little of taking these insights into a systematic, comparative process within and between cities in different countries where limitations, as well as strengths, are honestly

appraised. It is this gap that needs filling. The agonism between knowledge and belief is collapsed once knowledge is instrumentalized and becomes a means to an end which if not simply accepted, is adhered to in the face of the absence of time to consider alternatives. The 'performative' is replaced by the 'constative' (Bourdieu 2000) as ambiguity is turned into the symbolic power of the organization of the urban political apparatus in the name of elites. Mutual understanding between different parties and how they are positioned in terms of the potential for creating alternative practices is displaced and often erupts in struggles within civil society.

There is a growing interest in the idea of 'deliberative' spaces (Davison et al 2015), 'safe' spaces (this issue), 'third spaces' (Comunian and Gilmore 2015) and 'third places' (Oldenburg 2000) linked to the idea of knowledge as a commons (Hess and Ostrom 2011). If the experiments and initiatives we have discussed are to support more just urban transformations through facilitating more inclusive knowledge production, we need to consider how we practise as researchers. This does not presume a single model which can be replicated across contexts, but a commitment to a different way of working (May and Perry 2011). Much has been written about the endogenous imperative for new modes of knowledge production, in which the interesting areas of research are at the intersections of disciplines (Gibbons et al 1994) or an exogenous imperative in which 'wicked issues', such as urban sustainability inherently requires different approaches to the production of knowledge (Polk 2015). However, less is said about a reflexive imperative to review the social organisation of knowledge within cities and the implications for academic practice – in other words, whose interests are being served? Whose knowledge claims are being supported? Who benefits? (Agyeman and Evans 2004). As boundaries are moving and the practices we have criticised are also shaped and informed by those within universities, these contexts themselves need

examination in terms of the content of what is produced, how and with whom? After all: "there are many intellectuals who call the world into question, but there are very few intellectuals who call the intellectual world into question" (Bourdieu 2007: 23).

The ways in which particular views of human behaviour have been perpetuated to result in the current situation have been documented (Graeber 2012; Mirowski 2014). What this tells us is that we cannot simply divorce the seduction of these views from the reduction of the ambivalence that surrounds the trajectories of current development. That, as we have argued, is saturated through selectivity and particular imaginaries. Essentially, it is the attribution to knowledge of its potential to fulfil value as given by narrow, economic criteria concerned with prediction, based upon individual preference. It is these that need to be challenged. In relation to other domains, we speak of 'values' (Graeber 2001): "Value theory, then, is about how desire becomes social. It is about how our actions become meaningful by being reflected back at us in the form of representations – ultimately, of those very actions – that seem to be their aim and origin And this is about how different conceptions of 'society' are constantly being thrown up, like shadows on a wall, as a necessary part of that process" (Graeber 2011: 109). The work that goes into ensuring those different conceptions do not emerge from the shadows is considerable and when those are seen, they are attributed with individualistic self-interested motives in the realm of exchange.

Against this politics we are focusing on processes of representing shadow knowledges. Researchers are ambivalent about the role of such values and knowledges in their research. To achieve that, there is a need to interact with local forms of knowledge which may or may not be codified. Certainly, the idea of co-production has gone some way to tackling this deficit (Carroza 2014; Durose and Richardson 2016; Perry and May 2015b). However, bringing back in the importance of context means understanding the dimension of

'tacit knowledge' that is often hidden, or denigrated. Whilst deployed in all sorts of ways in various fields of endeavour, it may be captured by the idea that: "we can know more than we *can tell"* (Polanyi 1983: 4. Original Italics). The act of socialising knowledge continues apace in these formulations. Whatever the means through which we communicate about something, there is reliance upon its reception that completes its understanding: a gap to be bridged through "intelligent effort on the part of the person to whom we want to tell what the word means" (Polanyi 1983: 6). This has the potential to break down that which saturates city-thinking: that is, the permanent possibility of a focus upon the future through a denial of present issues by those who line their pockets by accumulation through dispossession (Banerjee-Guha 2010). Such a process is an act of recognition that means taking seriously the

Representations of contextual knowledge, situated within a relational understanding of how places develop and are influenced, while also highlighted the imaginative and innovative ways in which people practice in difficult circumstances, challenges acontextual knowledge architectures. A distinction between 'knowing how' and 'knowing that' is embodied in 'active intermediation' (May 2011; May with Perry 2011. Perry et al 2013). It encapsulates a way of thinking and doing that seeks to harness dynamic tensions into productive outcomes through bringing together different knowledges in developments that take on board other values. It involves intensive work at understanding the boundaries, limits and consequences of collaborative working and so it not a simple celebration of yet another method as a technocratic solution to a political issue. It is about active translation of information to knowledge to intelligence according to the needs, in context, of particular groups of practitioners and communities. It requires a continuous and interactive relationship between research participants and users in which differences in divisions of labour are recognized, negotiated, tolerated and acted upon according to a commitment to improve our

cities. That is a challenge to all involved for it brings into focus the ways in which dominant architectures of knowledge exclude, omit and denigrate that which cannot be readily subsumed within its frames of reference.

Calls for the 'just city' focus upon strategies that build coalitions of interest to focus on issues of equity (Fainstein 2010). To achieve this end knowledge needs to be unbundled and rebundled (Perry et al 2013) to prioritise synthesis, application and learning as much as the generation of new knowledge. It is a challenge to the academic imaginary of global excellence embodied in journal list fetishism (Willmott 2011) and competitive relevance where academics, consultants and think-tanks peddle their models of reality as the reality of their models. Learning through shared know-how is precisely the kind of exchange between cities that should be encouraged to replace the dominant emphasis on one-size-fits-all solutions, drawing on an expanded concept and practice of urban expertise and evidence (McFarlane 2011). The search for just and environmentally sustainable futures requires organising cities in such a way as to connect knowledge about an area to the capacities and capabilities to make desired changes.

Encapsulated in active intermediation is the idea that universities are not just places of promise for the knowledge economy, but spaces of reflection (May and Perry 2006. May 2006). A concern with competitive success fed by 'expert' knowledge exceeds the realm of understanding among the urban population whose disjuncture enables its continuation. That situation is not helped by the observation that social scientists who study alternative, common pool resources often adding to centralized forms of political authority (Ostrom 2015). The absence of such understanding, along with that of alternative means to what is assumed to be 'normal', has led those with whom we have worked over the years bemused at the speed of changes, dissatisfied with the lack of time to reflect and silenced unless engaged in a self-

fulfilling anticipation of the reproduction of the status quo. Freneticism – being and working at being busy with little time to stop and reflect - rules at the expense of reflexivity. Both time and knowledge are implicated in power or, more accurately, in a relation that relieves participants of engagement with alternatives through a spectator view of the world. In this sense if universities simply reflect their environments, what is the distinctiveness of the knowledge they produce, the practices they embody and hence their futures?

Engagement through a process with city officials to produce urban intelligence is not a simple process (see this issue). For all parties it may mean an admission of ignorance and not a celebration of expertise that is born of a distance from the contexts of action. Equally, context determining the content of knowledge is challenged through interactions with different groups that lead to relational reflections on practice and the process of sense-making. The danger of the content of 'expertise' being attributed in such a manner to confuse it with its consequence diminishes the democratic sphere of deliberation. Whilst not ruling out denial, interactions in the production of different forms of knowledge with those who are the intended users of that knowledge at least reduces this likelihood and provides additional insight into the conditions that inform translation into action.

Through seeking to generate these practices on a more general scale, no claim is made that they represent simple solutions to pre-existing problems, or that they are conducted without issues arising in terms of power, expectation and the capacity to achieve changes at varying scales of activity. What is being claimed is that we need to take the political climate and continuing issues seriously by building partnerships outside of the normal knowledge production process that are based on trust. That is a challenge to the short-termism that so often informs the evaluation of knowledge and to those who readily denigrate views

according to their absence of 'realism'. Synthesis of existing knowledge and understanding is to be celebrated for history is often forgotten in order to constitute 'innovation'.

We have argued that means changing the institutional expectations that weigh upon parties to these processes and that also means academics whose success is based upon what is assumed to be the production of 'new' knowledge. If the intention is to benefit different constituents in a city, the current situation is minimally unhelpful and maximally destructive. Whilst it is helpful to speak of the mutual constitution of needs within a spirit of cooperative inquiry that does not presuppose a final establishment of consensus (Mouffe 2005), what is proposed is the creation of more spaces of deliberation through the enlargement of 'civic epistemologies' (Jasanoff 2012). It is here that universities can play a central role in urban development beyond the reproduction of the status quo by being places for this purpose. Building these into practices and developing clear understandings of what needs to be achieved and how, within new partnerships including those who are so often excluded or treated as the objects of research, is not a sufficient condition for success. However, it is an important contribution to challenging dominant knowledge architectures and transforming our cities into more just and inclusive places.

Summary

Current architectures of urban knowledge production require critique and transformation. Processes of active intermediation are a way forward which challenges traditional orthodoxies and polarised discourses to offer the potential for more inclusive sustainable knowledge-based urban development. In the process of seeking alternatives, it is important to avoid the idea that there is a model – no matter how well packaged – that can resolve the tensions in the production, application and circulation of knowledge. For this reason, serious attention needs to be given to appropriate forms of organising urban research

as a collaborative endeavour that recognises differences in context and similarities in aspiration and resolve. That encompasses an understanding of different practices and forms of knowledge that are omitted from the lenses of dominant forms of epistemic framing.

What we have described and is represented in the papers in this special edition is not a model, but framework of considerations to be addressed. Needs will vary between cities and there will be differences in the issues they encounter (what) and the capacity and capability to take action (how). Core to this work is embeddedness through building trust between groups to ensure the viability and success of its outcomes. Concerted action to achieve just, sustainable cities requires transformations in our societies. It also requires effective organisation and the inclusion of those who are often excluded from the knowledge production process.

Knowledge can help us both a little and a lot. It can help a little in the sense that transformation is not a matter of theory, philosophy or knowledge and a great deal in sense that it can: "destroy the rationalistic ideology, the illusion of omnipotence, the supremacy of the economic 'calculus'" (Castoriadis 1991: 197). Within a process of 'participative transformation' (Klev and Levin 2012), the exercise of thought and responsibility takes place alongside seeing reason and rationality as historical creations of our making. After all, we have changed many times in our history before and better possibilities remain open to us for how we organize our cities in a world faced with the depletion of natural resources alongside vast inequalities and injustice.

Our contribution is a part of the call from within critical urban studies to appeal to the 'real' as a counterpoint to the urban imaginaries and visions promised by neoliberal growth coalitions (Chatterton 2000; Hollands 2008; Perry et al 2015). It is a challenge to the forms of justification deployed in mainstream knowledge production as a stage in the constitution of

more just relations (Forst 2014). In the process it contests dominant representations and trajectories through the incorporation of experiences of urban communities excluded from the promise of neoliberalism. Systematic, comparative and collaborative research agendas can then focus on identifying and critically assessing 'real' examples of alternative and transformative knowledge practices to inform and forge more inclusive and sustainable futures.

Acknowledgements

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