International Journal of Urban and Regional Research
DOI:10.1111/1468-2427.12047

Defensible Space on the Move: Revisiting the Urban Geography of Alice Coleman

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Abstract

This article traces the movement of the concept of 'defensible space' from New York City in the 1970s, where it was developed by the Canadian architect/planner Oscar Newman, to London in the 1980s and into design interventions in British public housing in the 1990s, through British geographer Alice Coleman, who acted as an especially powerful transfer agent. In focusing on this urban design 'concept' on the move we contribute to existing scholarship on policy mobility and city building in a number of ways. First, we explore an instance of the movement/mobility of a planning concept in a historical period (the recent past) largely overlooked to date. Secondly, we demonstrate that this movement was the result of a disaggregated series of expert knowledge transfers and localized translations of pre-policy expert knowledge, generated through university-based research work and networks. We theorize this instance of urban planning mobility by way of the interlinked insights offered by the sociology of science and policy-mobilities literatures. As this is an instance of university research shaping public policy it also offers an opportunity to reflect upon the meaning of 'evidence-based policy' and the impact agenda in contemporary higher education.

Introduction

'Defensible space' is a programme of urban design diagnosis and intervention directed towards reducing crime and negative social behaviour and restoring a sense of security to residents. It assumes that these goals can be attained if the external spaces around dwellings are (re-)designed such that residents more directly control or feel responsible for them (Newman, 1972; 1976; 1996). Canadian architect/city planner Oscar Newman (1972) developed the concept of defensible space through a detailed analysis of the design features and crime statistics of New York City's public-housing projects in the 1970s. Newman's concept, and the research methods that underscored it, re-emerged in London in the 1980s and influenced Margaret Thatcher's era of extensive housing-policy revision. It did so by way of the research of the King's College London geographer Alice Coleman, who published her findings in a persuasive, but controversial, book — *Utopia on Trial: Vision and Reality in Planned Housing* (1985). It is the trans-Atlantic journey of this urban diagnostic tool, the scholarship that underwrote it and its entrance into policy that is the focus of this article.[1]

1 This article draws on specific material from a much wider study we are working on, alongside Elanor Warwick, who was previously Head of Research at CABE and is currently undertaking a part-time PhD in Geography at King's College London. That wider collaboration focuses on the uptake of the concept of defensible space and related, second-generation, design-based crime-prevention interventions such as the UK's Secured by Design (see http://www.securedbydesign.com/).

There was no clearly bounded or explicitly labelled 'defensible space *policy*' in 1980s Britain. However, there was in its name, research conducted by Coleman, governmentally endorsed institutional formations (notably the Design Improvement Controlled Experiment, DICE) and budget allocations, as well as built-environment interventions in council housing stock. Coleman's research on the relationship between building design, human behaviour and sense of security was central to the state-endorsed articulation of defensible space principles in the UK. Importantly, her scholarship and the scientific 'proof' it offered was able to assume this central role despite being met with scepticism and criticism among peers and civil servants alike. For this reason, this case also offers a useful historical perspective with respect to the contemporary emphasis on relevance and impact within academic research assessment.

The account that follows assumes three interrelated things. First, policies only occasionally move as fully formed things. What moves when policy is seen to replicate itself over time and across space is a far more disaggregated set of knowledges and techniques that are better thought of as pre-policy or sub-policy epistemes and practices. Secondly, it is *in situ* that these knowledges and techniques are translated into policy, sometimes recognizable as the originating policy brand or type, sometimes not. This is an embodied process and dependent upon highly contingent translations and innovations. Thirdly, there is a non-linear interplay between university-based research and policy development (see Rein, 1980). The idea that academic knowledge is 'used' in policy formation is insufficiently complex to account for the contingency and controversy that can be attached to such knowledges becoming policy-relevant (see Campbell, 2002; Smith, 2010).

By looking at this instance of an urban design concept moving from North America to Britain over the course of the 1970s and the 1980s, we offer an insight into the flow of expert urban knowledge from a managerialist context, in which Newman's science sought to serve the improvement of public housing, to an entrepreneurial context characterized by neoliberal policies of deregulation and privatization (Harvey, 1989). A 'flagship policy' of Thatcher's Conservative government was the Right To Buy scheme, which allowed tenants of state-provided and managed housing to buy their homes at discounted prices (Jones and Murie, 2006: 1). Coleman's translation of Newman's methods of analysis and prescriptions for design intervention resonated with this particular agenda of privatization. By attending to the production and circulation of Coleman's scholarship in wider processes of housing privatization, this article 'thickens' the historical scope of current scholarship on the transnational knowledge formations that underscore city building. It also offers a useful historical perspective within the largely 'presentist' emphasis within policy-mobilities scholarship (McFarlane, 2011). Focusing as it does on a particular moment in the recent past (the 1980s), which marked 'a key moment in the unfolding of the global privatization agenda' (Larner and Laurie, 2010: 218), our study contributes to understanding the diverse geographies of privatization through the global movement of theories, policies and techniques (Larner and Laurie, 2010: 218; see also Ward, 2006; McCann, 2008). As such, it plays a modest role in extending our understanding of what Brenner and Theodore (2002: 349) refer to as the relationship between city building and 'actually existing neoliberalism'.

Situated science in (mobile) policymaking

Scientific inquiry undertaken in the context of the academy was central to how the urban design concept of defensible space both travelled across the Atlantic and, subsequently, entered into the public policy of Thatcher's Conservative government. As such, our thinking draws inspiration from two synergistic theoretical fields: policy mobilities and sociologies of science.

Recent scholarship, much of it emanating from a close network of economic geographers, has placed the matter of 'policy mobilities' centre-stage in urban studies

(McCann, 2008; 2011). These geographers seek to better understand two related phenomena: the ways in which remarkably similar neoliberal governmentalities have manifested under conditions of globalization (Peck, 2002; Brenner *et al*., 2010; Larner and Laurie, 2010) and, linked to this, how urban development proceeds through fast-paced, self-reflexive logics of intercity policy adoption, circulation and learning (McCann and Ward, 2010; Peck and Theodore, 2010a; 2010b; McFarlane, 2011). Such is the novelty of this new era of policy mobility that scholars have distinguished between it and preceding eras of 'policy transfer' (Peck and Theodore, 2010a; see also Clarke, 2012). This scholarship has extended our understanding of the transnational networks of expert knowledge formation that underscore the widespread take-up of a range of policies, such as workfare initiatives (Dolowitz, 1998; Peck and Theodore, 2010a), Business Improvement Districts (Ward, 2006; 2007; see also Hoyt, 2006; Tait and Jensen, 2007; Cook, 2008), creative city agendas (Wang, 2004; Peck, 2005; Kong *et al*., 2006; Luckman *et al*., 2009; González, 2011) and health-care programmes (Ward, 2006; 2007; McCann, 2008). It has also offered important insights into the distributed, disaggregated and messy ways in which policy ideas and expert knowledges are translated from one local context to another. But in making strident claims about the novelty of contemporary 'mobilities' as opposed to past 'transfers', assumptions are often made about how and why those earlier transfers happened and the effects they had. Useful exceptions to this dominant presentism in policy-mobilities research include Larner and Laurie (2010) on the early years of neoliberal privatization agendas; Clarke (2010; 2012) and Jayne *et al*. (2011) on city twinning; and McFarlane's (2011) account of urban planning initiatives in the mid-twentieth century.

The focus of policy-mobility work on the globalization of neoliberalism means it often bypasses existing scholarship on other kinds of urban relationality, both present and past. For example, rarely acknowledged is the large body of work on the way in which certain urban design interventions, including architectural styles, have travelled from city to city. We might think here of McNeill's (2009) work on transnational architectural firms and global urban forms, such as the iconic building or the skyscraper, or the accounts of how new urbanist design principles have moved (Thompson-Fawcett, 2003; McCann and Ward, 2010; 2011: Moore, 2010), or even the much older work by King (1980; 1984; 2004). We might also think of the historical scholarship on transnational urban planning (for example, Masser and Williams, 1986; Saunier, 1999a; 1999b; 2002; Ward, 1999; 2010; Nasr and Volait, 2003; Brown-May, 2008; Saunier and Ewen, 2008; Healey and Upton, 2011; Roy and Ong, 2011).

We have already noted that central to the localized manifestation of the concept of defensible space in British housing policy was the borrowed science of Oscar Newman, which was translated and elaborated by Alice Coleman. To understand the instantiation of defensible space into British housing policy we must attend to the making of Alice Coleman's science and the ways in which policymaking actors learned about and realized its recommendations. In part, this is a question of science in action and how its claims take hold and travel in the field of public policy. The sociology of science draws attention to the ways in which science, including those knowledge formations that might be labelled human geography or social science, are socially constructed and a result of contingent and located social (and other) forces (Ophir and Shapin, 1991; Pickering, 1992; Smith and Agar, 1998). With respect to geography, which was Alice Coleman's disciplinary identity, disciplinary historians have reflected widely upon scientific and populist geographical knowledge production (for example, Livingstone, 1992; Gregory, 2000; Withers, 2010). Of particular relevance to our own work has been the scholarship of Trevor Barnes on a range of developments in twentieth-century academic geography (Barnes and Farish, 2004; Barnes, 2006). For example, Barnes's history of quantitative geography has reflected both on its emergence and the wider disciplinary reception to it. Further, he has also reflected upon certain subgroups of academic geographers whose research effort was incorporated into government-policy development and research operations. Both themes of inquiry resonate with our own research on

Coleman, although, as we shall see, her work, though quantitative, was not considered sufficiently so.

Barnes's scholarship on the emergence and spread of quantitative geography and its related scientific claims has attended carefully to the 'peculiar social practices of individual scientists' (2004a: 280). He has demonstrated how the quantitative revolution in geography, despite all of its own rationalist rhetoric, emerged out of very specific conditions of production (Barnes, 2004a; 2004b). Barnes (2004b: 569) reminds us that scientific ideas, despite what they might claim, are not linked to 'a polished, distant, universal rationality'. Rather they are 'closely tethered to the eccentricities, complex interests, materialities and messiness of lives lived at particular times and places' (*ibid.*). Furthermore, he reminds us that 'intellectual production is always materialized through human bodies, and nonhuman objects' (*ibid.*: 570). In the case of Coleman's research, this included her female self, the contentious multi-storey buildings she studied, the indicators she used as evidence, and so on. Barnes (2004b) also reminds us that the truths of rationalist science do not simply shine by their own light. Rather, 'making and maintaining truth is a precarious achievement, involving an enormous amount of work of assembling and keeping on side a series of allies' (*ibid.*: 572). Latour (1987) called this 'translation': referring to how something is problematized and how others (human and nonhuman) are drawn into this interest, detouring from other possibilities. The concept of translation is, importantly, set against static models of technology and knowledge diffusion, which depict stabilized and bounded things (be they objects or facts) travelling through space and time (see also Montgomery, 2002).

Recent work by Colin McFarlane (2010) has offered an explicit bridge between Latourian thinking about the production and circulation of urban knowledge, including that which claims to be science, and policy formation. He proposes that urban formation is always interlinked with diverse processes of assembled 'learning' and he draws attention to the 'specific processes, practices and interactions through which [urban] knowledge is created' (*ibid.*: 3). In relation to policy-linked learning he specifically highlights its ideological enframing: the power at work in policy learning; the epistemic problem-spaces that are created and addressed in policy-linked learning; the organizational nature of that learning; and the imaginaries into which it is drawn. Below we look into the situated assemblage that accounts for how one geographer's science came to garner considerable public funds and reshape (literally and figuratively) Britain's housing policy.

A note on method

We view defensible space as a concept and a knowledge-production method replicated across space and time through localized instances. As such, our study is sensitive both to relational and territorial geographies, geographies of flow and fixity, transnational effects and place-specificities (McCann and Ward, 2010). Recently, Peck and Theodore (2012: 25) have offered up the notion of the 'distended case' to refer to such shuttling. This suggestive term captures the 'stretched' geographies of policy reproduction, while retaining a sense of the need to 'thicken' our accounts of transnational policy development through specific sites.

Defensible space is a mobile planning concept that gained its transnational effects through a set of embodied, materialized and located actions. It is always both a situated knowledge and a travelling theory (Livingstone, 1995; 2003). For policy theorist Richard Freeman (2012), accessing policy mobilities requires a focus on constitutive practices of communicative interaction, both oral (in meetings) and textual (in documents), which he places as central to policy*making*, its production and reproduction. Geographers have similarly observed that 'policy transformations . . . are clearly not realized declaratively or through administrative fiat; they are also embodied practices' (Peck and Theodore,

2010a: 172). For example, Larner and Laurie (2010) focus on mid-level technocrats who operate as transfer agents. It is certainly true that policymaking is often embedded in the 'banal practices of bureaucrats' (McCann, 2011: 115). But it is also linked to a range of other players, such as powerful elites who act as patrons or conduits for the realization of policy. These can include what are often labelled as 'consultants', some of whom may be based inside higher-education academies. These are academic researchers whose efforts are directed towards, and sometimes on the payroll of, public policy institutions. They produce 'public' or 'policy-relevant' knowledge and so operate kinetically in the field of policymaking. Alice Coleman was one such agent. She did not act merely as a conduit for defensible space scholarship and ideas, she was personally constitutive of it entering the policy field in Britain. In what follows we show how she came to construct her knowledge about design disadvantagement, as well as the conditions of alliance that led to her knowledge attracting political endorsement.

In trying to capture something of the communicative and embodied nature of Coleman's science in action we have reconstructed specific meetings, followed correspondence, revisited exhibitions, re-read published findings and their reception, and investigated work practices. Given that we are conducting a historical study, albeit one from the not-too-distant past, our ability to generate this detail has depended in large part upon the cooperation and generosity of Alice Coleman herself.[2] We have undertaken a series of in-depth interviews with Coleman, including in 2008 a video- and tape-recorded half-day interview with her in King's College London, and a video-recorded half-day 'walk-along interview' around some of the public housing estates in East London where she had put into action her version of Newman's idea of defensible space. Here we travelled (walked) with her as we travelled back in time, revisiting and reflecting on some of the sites upon which her ideas had impacted.[3] In 2010 we also undertook a video- and tape-recorded day-long interview of Coleman discussing her work in and through her own personal archives in her home in Dulwich, South London (see Figure 1).[4] Coleman has an extensive personal archive of the research undertaken during her career, stored in a separate house adjacent to her home. Our viewing of the archive in conversation with Coleman, and the guided tour of it we did as part of the interview, was an attempt to get as close as one can to her science. In the course of that day she told us a great deal about the intricacies and logistics of conducting her research for *Utopia* and subsequently as part of the DICE team. Although each interview has had a slightly different emphasis, our interest has been in better understanding the motivations for her research, the influence of Newman and the occasions of their meeting, the ways in which her research was conducted, its reception by political elites and policymakers, and the public funding of her 'design disadvantagement' project. A range of up-close methods allowed us to better see the folded spatial logic associated with the planning idea of defensible space. Our use of ethnography, oral history and archives revealed that the mobility of the defensible space idea was not merely about certain 'distance effects', but also about located proximities.

The support and cooperation of Alice Coleman also produces some difficulties. At this stage in our research our account is weighted towards Coleman's interpretation of this specific site and situation of policymaking. For example, Coleman's reconstruction of events shows her having meaningful and destiny-changing conversations (not only for herself but, more importantly, for her scholarly ideas), with powerful individuals such as government ministers, Prince Charles and Margaret Thatcher. In this sense, Coleman's account of how her science moved into public policy features more 'charismatic individuals' (Larner and Laurie, 2010: 219) than it does 'banal agents'. Chamberlain and

2 Alice Coleman was born in Paddington in 1923, graduated from Birkbeck with a degree in Geography in 1947 and took up a lectureship in Geography at King's College London in 1948.

3 We were interested to see Alice Coleman's reaction to the estates she had redesigned more than 10 years earlier. We stopped for a while on Alice Lane in Bow, a street in East London named after her.

4 Alice Coleman was also in communication with us via written letters between 2008 and 2010.

Figure 1 Alice Coleman discussing her archives at her home in 2010 (photo taken by authors)

Leydesdorft (2004) have commented upon the ways in which 'public biographies' involve seamless post-facto rationalizations in which ambivalence, multiple motivations, dilemmas and failures are concealed. For example, Coleman is guarded with respect to the scepticism of peers and the 'mid-range technocrats' at the Department of the Environment (DoE), whom she sees as having hindered her vision for design intervention in council housing. We have therefore started the process of thickening and triangulating Coleman's account by looking beyond her recollections and archive to other sources, including interviews with national and local government figures involved with Coleman or dealing with the implementation of programmes of action based on her findings. We have also accounted for more ambivalent aspects of the production and circulation of Coleman's science by looking at scholarly reviews of her work, produced either as stand-alone reviews or as part of historical housing and public policy review accounts.[5]

Although there is much emphasis in current policy-mobilities studies on ethnographic approaches, in our own work we also sustained an interest in and relied heavily upon the meaning and reception of two key published works of the two central scholars: Oscar Newman's 1972 book *Defensible Space* and Alice Coleman's 1985 book *Utopia on Trial*. In both books the authors make explicit their methods and the lineage of their science. But it is not simply their content that interests us. Callon (1991), in talking about techno-economic networks, understands scientific books as textual intermediaries that play a role in the building of science and technology networks, in the same way as embodied intermediaries such as skilled individuals do. We treat *Defensible Space* and *Utopia on Trial* as performative in that they do not simply represent a scientific or urban housing reality (as the authors saw it) but operate to produce those realities (Law and

5 At a later stage in the research we also intend to interview those who worked with Oscar Newman and Alice Coleman and more of those who were critical of Coleman's ideas in the UK – including architects and other academics, many of them geographers.

Singleton, 2000, 1; see also Barnes, 2002; Keighren, 2010). For example, Coleman may never have pursued the research direction she did if she had not encountered Newman's *Defensible Space*, and read it at a specific turning point in her own research trajectory.

Alice Coleman was an industrious geographer who, because of the impact of *Utopia on Trial*, spoke to government, was funded by government and even changed the very fabric of (at least some of) the built environment. Yet for all this there is an almost total absence of any mention of her in histories of geography (except Maddrell, 2009; see Domosh, 1991, on such absences). Coleman was reputedly a feisty, outspoken female academic, and her politics did not sit well with many, be they more critically inflected peers or more publicly oriented bureaucrats. In this sense, she engaged with what many consider to be the wrong brand of 'public geography' (Burawoy, 2004; 2005): someone operating in the 'extra-academic realm' conducting scholarship that was concrete, pragmatic, and serving wider neoliberal policy agendas and clients (see also Castree, 2006; Fuller, 2008). That scholarship appeared increasingly out of step with the trends then restructuring academic thought. As we have tried to understand her science we have wrestled with our own critical views about the neoliberal-political and housing-privatization policies that her science served. As we have tried to position ourselves in her world of work we have sensed that while she was once awarded *The Veuve Clicquot Award* for being '[a] woman in a man's world' she had little regard for feminist agendas.[6] 'I was a geographer rather than just a female', she insists (Coleman interview, London, 2008).[7] Yet Coleman also stands by her scholarship with a certainty that displaces any disappointment that criticism of her work brought. We hope that readers understand that this is not simply yet another critique of Coleman's work but an attempt to historicize it.

The science of design disadvantagement begins

It began accidentally in London; London, Ontario, that is. In 1976 Alice Coleman was a visiting lecturer at the University of Western Ontario in Canada. It was a crucial point in her professional life. A major part of her career across the course of the 1960s and 1970s was spent conducting the Second Land Utilisation Survey (Rycroft and Cosgrove, 1995; Maddrell, 2009). In the course of that work Coleman determined what she described as 'land use deterioration', an example of which was the 'dying inner city syndrome' (Balchin, 1980: 3; Coleman, 1980). This offered Coleman the basis for her next research idea, and she had gone to 'Western' for a sabbatical to conduct survey work on exactly such urban wastelands. It was here where she came across Oscar Newman's 1972 book *Defensible Space: Crime Prevention Through Urban Design*, an encounter she attributes to being 'a great book buyer' rather than a rational follow-on from her emergent thinking on conditions of urban deterioration:

> Well, in the University of Western Ontario they have a very good bookshop . . . And I used to go and browse down there. And I am a great book buyer. And I saw this and thought it looked very interesting. So it could be chance or it could be simply because I am that sort of person (Coleman interview, London, 2008).

6 The characteristics on which this business award was based were that the winner be bold, audacious, daring, entrepreneurial, innovative; profitability was important, as was benefit to generic industry and the nation as a whole.

7 Nevertheless, Coleman had to start a petition at King's College London to get female academics allowed into the male dining and common rooms and was not promoted to professor until two years before she retired; this she put down to sexism in the academy: 'That was the anti-woman business, I think, yes' (interview with Coleman, London, 2008). The context of gender cannot be ignored, but it is not the direct focus of this article.

Although Coleman's narrative implies she 'accidentally' encountered Newman's work while book browsing, her thinking was leading her in the direction of scholars who, like herself, were grappling with conditions of inner-city deterioration.

In *Defensible Space* Newman offered a diagnosis of an urban problem: poor architectural design created opportunities for criminal activity. He also developed a remedial proposition: that such activity could be prevented through urban design that provided residents with patches of territory over which they felt some ownership and sense of responsibility, enabling them to be agents in ensuring their own security. The field sites for Newman's research were the public-housing projects of the New York City Housing Authority, and his findings drew on the crime and vandalism statistics gathered by New York City's public-housing police, as well as on data his team had collected through resident interviews and visual surveys.[8] Because of his access to very precisely located crime and vandalism statistics he was able to cross-tabulate locations of such 'deviant' activities with a range of contextual factors linked to the design of the buildings. He also did 'before and after studies' of built-environment 'experiments' in design changes (Newman, 1972: ix).

Newman's peers received his work ambivalently and it was subjected to criticisms of environmental determinism that foreshadowed those that Coleman's work was later to encounter. Despite this, his ideas garnered interest among housing policymakers and housing managers, an interest that has remained to this day. This wider endorsement of his ideas is evident in the fact that for most of his career he was able to work as a consultant, including for the US Department of Housing and Urban Development, the New York City Housing Authority and other agencies. His original and subsequent research was well funded by the National Institute of Law Enforcement and the US Department of Justice, as well as the New York City Housing Authority. This impressive list of funding bodies and institutional allies allowed him to set up an expert research team (of urban planners, designers, architects, social psychologists, and so on) and was testament to the wider public appeal of his research.[9] This disjuncture between peer review and public interest makes sense when one thinks of the medium in which he conducted his research. In the 1960s and early 1970s, New York City was characterized by the erosion of its economic and fiscal base, deindustrialization, structural unemployment and large-scale urban-renewal projects. Some 19% of the US's public-housing projects were located in New York City at that time. The values and ideologies of urban 'managers' (institutional gatekeepers) were paramount in the funding of urban agendas. The notion of better designed public housing cannot be disaggregated from the often technocratic practices of the managerial city. Urban government was preoccupied with its redistributive role, that is, the local provision of services, benefits and facilities to urban populations, but burdened by a range of intractable difficulties, the most troubling of which were crime and building deterioration. From the mid-1970s (more specifically the 1973 oil crisis) onwards, urban governance became increasingly preoccupied with exploring new ways of urban development and redevelopment (see Harvey, 2007: 6–7). The diagnoses and solutions offered by defensible space fitted well with the agendas of that time and place (on New York City in the 1960s and 1970s, see Bellush and Netzer, 1990; Brecher *et al.* 1993; Berg, 2007).

8 The New York City Housing Authority had its own police force, tasked with attending to crime in public-housing estates, which produced a unique, spatially accurate data set on criminal behaviour.

9 *Defensible Space* has become a planning best-seller and the concept is now common parlance among planners. Newman's research led to the setting up of The Defensible Space Institute, now The Institute for Community Design Analysis, Inc. – a not-for-profit corporation (see www.defensiblespace.com/institute.htm). In Britain, Newman's defensible-space principles have been absorbed into many estate-improvement schemes and British design guidelines (Warwick, 2009).

'Defensible space' travels to Britain

In 1976 in London, Ontario, Alice Coleman joined the assemblage of allies forming around the idea of defensible space. In so doing she became a key agent in transferring Newman's concept, and the science that underscored it, to Britain. By Coleman's own account, when she first read *Defensible Space* she immediately thought of its policy relevance to the UK, where there were what she and others of the time referred to as 'problem estates' (Lund, 1996):

> when I read that book, I thought, this would be marvellous. Our Department at the [*sic*] Environment would love to know about this (Coleman interview, London, 2008).

On her return to the UK, Coleman arranged to see an official in the Department of Environment (DoE, then the principal national government department overseeing housing policy) to relay her sense of the relevance of these ideas. Officials were unconvinced and told Coleman that it was 'an American problem' (Coleman interview, London, 2008). Clearly the DoE thought the 'problems' that the concept of defensible space addressed belonged elsewhere, to a place where public housing was a smaller proportion of the housing stock and housed an extremely impoverished and racialized minority. They also offered a competing explanatory framework: '[t]hat's all socioeconomic', as opposed to environmentally determined, they argued. Yet civil servants had already started to consider the relative merits of Newman's proposition and, prior to Coleman meeting with the DoE, the Home Office had commissioned the first of two studies evaluating the relevance of what they dubbed 'vandalism research' and 'crime prevention theory' (Sturman and Wilson, 1976; Mayhew, 1979).

Coleman being the personality she is, was spurred on by this rebuttal. She was convinced that if she produced the proof, then powerful agents such as the DoE would be persuaded. As Coleman reflected after her meeting with the DoE: 'That's when I thought: "We need to go and map this!" ' We can see clearly the way in which this emergent object of 'problem estates' was installed in the particular geographical methodology of mapping. It was a method in which Coleman was well trained owing to her experience with the Second Land Utilisation Survey. That survey was undertaken by teams of amateur surveyors (many of them geography school-children) who had to be trained in the method of 'field mapping' (see Lorimer, 2003). This was a decidedly visual science, in which field observations of land use and boundaries were inscribed in the field (or shortly after) to Ordinance Survey maps (Coleman and Shaw, 1980). Mapping the world as it was (or was *seen to be*) was central to Coleman's geographical science. Her science, although from entirely different origins, had obvious synergies with the empirical visual assessment and locational mapping methods developed by Newman for his defensible-space science.

Convinced that all she needed was proof that architectural design was causing the problem of 'problem estates', Coleman undertook some preliminary self-funded research on two estates in Tower Hamlets and Southwark, London, to get the 'relevant data'. She borrowed from the methodology established by Newman, although from the outset she innovated, drawing on her existing land-survey skills set. On the basis of this preliminary research Coleman drafted a 'two-page paper' on the topic of 'Design disadvantagement in housing' and sent it off to what was then the Joseph Rowntree Memorial Trust, a British charity funding research on housing and poverty. According to Coleman, 'two men liked it' and invited her up to York (where the Trust was, and still is, located) for an interview. Convinced of the potential of her research, the charity gave Coleman an 'unprecedented' £199,000 over a 5-year period. With this funding Coleman established, within the framework of her already existing Land Use Research Unit at King's College London, what she dubbed 'the design disadvantagement team'. The problem towards which their research effort was directed was this: 'What is wrong with modern housing estates?' (Coleman, 1985: 1). Here we see the problematization process

explicitly at work — and one that was already able to attract resources and was being realized in institutional formations.

Coleman and her research team undertook a large-scale mapping survey consisting of 'detailed mapping on a scale that would generally be considered daunting' (Coleman, 1985: 2). The observational survey covered over 4,000 blocks of flats accommodating about a quarter of a million people in the London boroughs of Southwark and Tower Hamlets. In addition (as controls) she looked at 4,172 houses in the same boroughs and an 'out-of-town estate', Blackbird Leys in Oxford. These became what Gieryn (2006) has referred to as 'truth-spots', field sites that are called in to speak to more spatially and temporally extensive claims. In developing her methodology, Coleman turned a critical eye on her methodological template, Oscar Newman's study of the New York City projects. She visited Newman in New York to find out more about his methods; indeed, this was to be the first of three face-to-face meetings between them. Coleman soon found that Newman's methods needed adjusting, not least because she did not have access to located crime statistics. Coleman had to rely on other indicators for deciphering 'problem' council housing. Her methodology was based more on her pre-existing expertise as a land use surveyor than on Newman's. Most notably, Coleman trained a team of field researchers whom she sent out to conduct visual surveys of her chosen field site estates.

> Well, when we were doing it, we found a lot of things in England that they [New York City] didn't have. They didn't have overhead walkways — bridges — joining the blocks. And we thought, well, we must map that. And, in fact, we mapped quite a lot of things, altogether about 70 different things (Coleman interview, London, 2008).

Her teams mapped the design and layout of buildings and tested to see which design variables (block size, circulation, dwellings per entrance, number of storeys, corridor layouts, overhead walkways and the spatial arrangement around semi-private and public spaces) were associated with 'lapses in civil behaviour'. Those lapses were detected by way of a number of visible indicators (litter, graffiti, vandalism, urine and excrement), what she called 'material clues that could be objectively observed' (Coleman, 1980: 23). She also drew on other indicators derived from other sources (notably, family breakdown and children-in-care statistics). Coleman prided herself on producing, like Newman before her, quantitative evidence, which, she argued (*ibid.*: 14), 'gave added value' to the truthfulness of her claims. Based on these data, Coleman developed a series of trend line graphs (see, for example, Figures 2a and 2b) in which design values (for example, number of storeys, number of dwellings per entrance, number of overhead walkways, etc.) , are marked on the horizontal scale, and proportion of blocks 'abused' — for example, litter (L), graffiti (G), damage (D), children in care (C), urine (U), faeces (F) — along the vertical scale.

Armed with this evidence Coleman then produced 'design disadvantagement scores', which were calculated by adding threshold disadvantagement values for each design variable, based on abuse indicators. The higher a block of flats' disadvantagement score, the higher the percentage number of blocks affected by the indicators of 'abuse'. Coleman's findings, she argued, demonstrated clearly the negative social impacts of certain types of housing design, most notably multi-storey blocks of flats.

Contentious facts: the reception of *Utopia on Trial*

> The academic standing of a text is an uncertain guide to its social and political impact (Lipman and Harris, 1988: 182).

Coleman's 1985 book *Utopia on Trial: Visions and Reality in Planned Housing* summarized the findings of this project. It presented those findings in the style

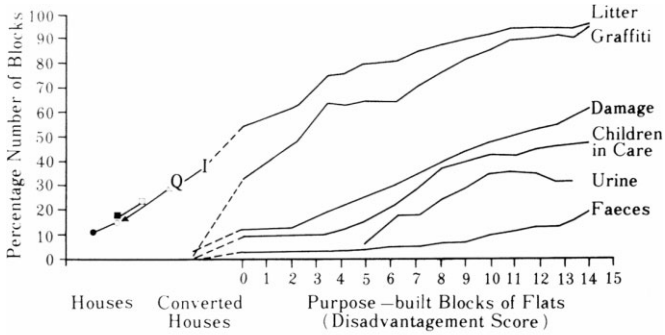

FIG.29. Trend lines for the six test measures in houses (left), converted houses (left-centre) and purpose-built blocks of flats (right). The houses are divided into age groups: circles for inter-war, squares for post-war, and triangles for pre-1914. In each case black symbols denote houses with front garden fences and gates and white symbols denote houses lacking one or more of these features. The converted houses are divided into two groups. Those in Queen's Park (Q) are smaller and less littered than those in the inner city (I). Purpose-built flats are divided into classes with different disadvantagement scores from 0 to 15. As their trend lines reflect the combined effect of all 15 designs they are generally smoother than those for individual designs. The graph as a whole approximates to the theoretical growth curves in Fig.8.

Figure 2a Line graph from Coleman showing test measures with respect to different housing typologies (*source*: Coleman, 1985: 127, reproduced with kind permission of Hilary Shipman Publishing)

of a court-room trial. The accused, the 'suspects', were the bad housing-design features, the case for the prosecution presented the evidence of the trend curves that linked indicators of social malaise to design disadvantagement indicators, and the 'corrective measures' entailed rehabilitating the 'offenders' (essentially the multi-storey flats) through design interventions embedded in estate-improvement programmes. The prosecution, with Coleman as prosecutor, won. *Utopia* was a trenchant critique of multi-unit public housing in general, and the modernist council tower block in particular (Towers, 2000: 113–17). Coleman (1985) saw this typology (and flats in general) as failed utopias that 'aimed to liberate people from the slums but (came) to present an even worse form of bondage' (*ibid.*: 180). She made three main recommendations: that no more flats should be built, that house designers should renounce the layouts of the last decade, and that existing flats should be modified to remove their worst design features. Such modifications included dismantling overhead walkways, dividing up the 'confused' space of large communal green areas into individual gardens, and so on.

Utopia was, by Coleman's own account, well received by Newman, who visited her at King's College London in the late 1980s. At that time he indicated to Coleman that he liked *Utopia* because, as he put it to her, 'it had gotten him out from under the skirts of Jane Jacobs!' (Coleman interview, 2008). But such flattery was short-lived. Coleman's research was vociferously rejected by many academics who viewed it as little more than pseudo-science, 'simplistic rather than simple' (Lowry, 1990: 246), 'pompous' (Smith, 1986: 244) and 'under-contextualized' (Murie, 1997: 32). Lipman and Harris (1988) wrote an especially visceral critique, charging that Coleman's pronouncements fed off and were amplified by the prevailing New Right ideology, which they echoed. Peers challenged its rigor and baulked at its determinist emphasis on built-environment causes and solutions to complexly formed social issues:

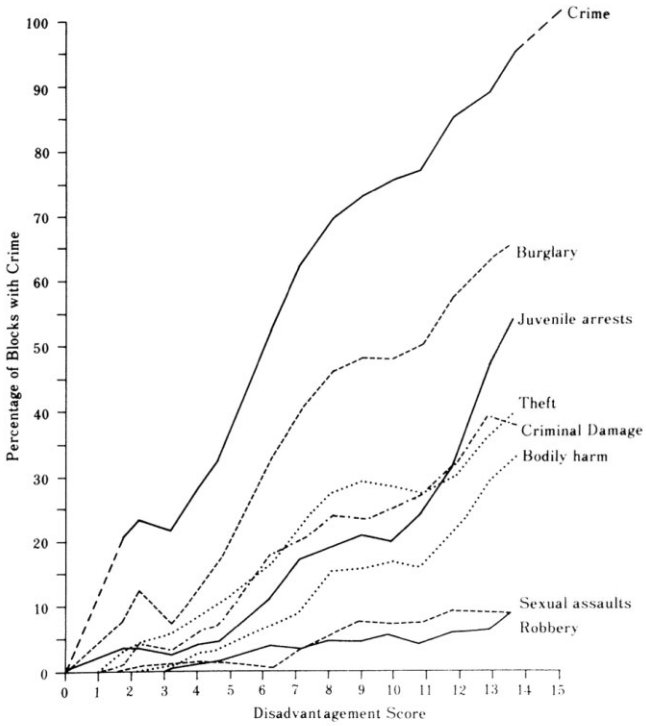

FIG.40. Trend lines for seven classes of crime in 729 blocks of flats in the Carter Street Police Division of Southwark. Crime increases as design disadvantagement worsens. No crimes were reported from the blocks with zero disadvantagement score, but the average rate for blocks with scores of 13, 14 and 15 exceeded one crime per five dwellings (1980 figures).

Figure 2b Line graph from Coleman's summary chapter, showing trend lines for classes of crime in blocks of flats in Southwark (*source*: Coleman, 1985: 172, reproduced with kind permission of Hilary Shipman Publishing)

> Coleman's dismissal of the influence of poverty is based on an unsound method and an inadequate theoretical analysis. Her recommendations for policy are in consequence a diversion from the real needs and issues (Spicker, 1987: 283).

A particularly forensic re-examination of Coleman's methods was presented by the then early-career geographer Susan Smith. Her review of Coleman's work in the influential journal *Urban Studies* trawled through the statistical irrationalities of Coleman's self-declared 'accurate factual observations', 'scientific tests' and 'fair and unbiased' evidence. Smith concluded that:

> Coleman has used her armoury of statistics to shoot herself in the foot . . . She has done nothing . . . to clarify our understanding of relationships between dwelling design and the quality of life, and her recommendations are dangerous in offering politicians and planners an over-simplistic, yet superficially appealing, panacea for the complex social problems of urban communities in an ailing economy (Smith, 1986: 246).

A common thread in the criticism of Coleman's approach was its grounding in architectural determinism, which contended that the built environment caused people to

behave in certain ways. Not even architects wanted to claim this power. Bill Hillier, at the Bartlett School of Architecture in London, argued that Coleman's claim to have established a 'scientific' correlation between design features and social malaise was unfounded:

> Her method of quantification of malaise is flawed, her correlations largely illusory and her attempt to test for social factors desultory (Hillier, 1986: 39).

As architectural historian Jeremy Till (1998: 66) later reflected:

> To promote, say, balcony access over chronic unemployment as the cause for social unrest is symptomatic of a determinist approach to architecture [that is] extraordinarily misinformed [and] extraordinarily dangerous. Misinformed because, in its focus on architecture alone, it conveniently overlooks the wider social and political structures that contribute to the production and inhabitation of the built environment; dangerous because of the political amnesia that it thereby induces.

Coleman was clearly upset by these negative peer reviews, and even now when she reflects upon them one can feel her sense that they were unjust in the face of her 'facts'. When asked what she thought about the reactions to *Utopia on Trial*, Coleman's recalls the good with the bad:

> Well, the first year it was wonderful . . . everybody reviewed it. I took people out, you know, famous people from the various papers and so on. And they gave me big reviews about it . . . And then at the end of the year I began to get some very bad reviews from people who didn't like it and just cooked up what they could say against it. For example . . . the architectural correspondent of *The Guardian* wrote a most dreadful review on it . . . And he obviously hadn't even read it, he couldn't have read it because he couldn't have written what he had, you see. Anyway, his editor decided that it would be nice if he interviewed me. So he rang me up: 'Can I come and see you?' I said, 'No.' 'No? Why not?' [he asked]. I said, 'Well, because of what you have written about me, you obviously hadn't read it, you haven't got it right.' 'Oh,' he said, 'you win some, you lose some, isn't it the same with you?' I said, 'No. I'm an academic and I am trying to get it as accurate as I can the whole time.' So that was that. Then, to my surprise, he wrote another review in the same paper, same author, same book, glowing. He had read it!' (Coleman interview, London, 2010).

Coleman is especially clear about the injustice of the critique that she worked within a simple environmental determinist model. As a geographer working within a history of debate about environmental determinism, her views are well formed in this regard:

> I don't think it's right to say that determinism is a bad thing . . . My work is not determinist. It is probabilistic . . . all this deterministic business, I think it's . . . talk about nothing (Coleman interview, London, 2010).

Utopia was written in a style that anticipates and actually speaks back to such criticisms. In the chapter entitled 'Cross-examination' Coleman gives 'a hearing' to the main criticisms her research had already received, setting up those criticisms as questions by an imaginary cross-examiner. In response to a question suggesting the work is deterministic, her probabilistic assumptions are clear:

> we are not dealing with determinism . . . Bad design does not determine anything, but it increases the odds against which people have to struggle to preserve civilised standards (1985: 83).

Coleman's science circulates and gains allies

Despite all the academic criticism, Coleman's work (like Newman's before it) gained important allies, a process *The Architects' Journal* (1990) termed 'Colemanisation', and Coleman herself 'The Thatcher Project'. In 1987, her work was the main impetus for an important Rehumanising Housing conference (Teymur *et al*., 1988), in which the pathology of twentieth-century housing became top of the agenda for British architects (Harwood and Powers, 2008). As one housing scholar has recently noted, '[t]hough the organizers tried to downplay the significance of Coleman's book as an impetus for the event, nearly every essay addressed her work' (Lowenfeld, 2008: 167). There were other more fully receptive ears to the line of argument being forwarded in *Utopia on Trial*, some of them very powerful: it had wide appeal 'from the architectural press to the BBC, from local authorities to the Prime Minister, from Chief Constables to Ministers of State' (Lipman and Harris, 1988: 184). According to Coleman, the Prince of Wales, who had an emerging interest in architecture and inner-city rehabilitation, read the book on his way back from a visit to Australia. He was so impressed with what he read that he contacted Coleman and asked her to tour three of the estates she had worked on with him (see Figure 3). The event has entered into modern London folklore, as indicated by this account by public historian Patrick Wright:

> One fabled day in March 1986, he (Prince Charles) boarded a battered orange minibus hired from a left-wing community group in Tower Hamlets, and journeyed through the city in a company that included geographer Alice Coleman, architects John Thompson and Richard McCormac, and Nicholas Falk, the urban planner and environmentalist who had organized the expedition. The party visited the notorious Aylesbury Estate in Southwark and then zig-zagged

Colour online, B&W in print

Figure 3 Prince Charles visits the Lea View House in Hackney in 1986 with geographer Alice Coleman, architects John Thompson and Richard McCormac, and urban planner Nicholas Falk (*source*: http://www.clapton.freeservers.com/catalog.html)

> up through East London into Hackney, where the Prince alighted, boarded a more reputable-looking official car, and drove round the corner for the opening of Lea View House in Hackney, a pre-war housing estate which had been refurbished by Hackney Council's Direct Labour Organization, according to a model scheme of 'community architecture' (Wright, 2009: 297).

With all this attention it is no wonder that Alice reflected: 'I thought politically it was going places' (Coleman interview, London, 2008). She and her science did indeed go to some very influential places. For example, she became part of the shifting 'kitchen cabinet' established by the Prince of Wales to help him form his increasingly controversial public interventions around architecture in Britain. These advisors, Raines (1988: 11) noted, 'would never be allowed into the bland policy briefings set up by Government', yet their ideas, and those of Coleman in particular, shaped the Prince's 'urban planning philosophy'.[10] Convinced of the policy relevance of her research, a determined Coleman then contacted all the political parties in England and wrote directly to Margaret Thatcher on 18 December 1987, asking Thatcher to see her in the new year 'so that I could explain why British estates could and should be changed' (excerpt from Coleman's original typewritten letter). She was invited to a brief (ten-minute) meeting with the influential Conservative advisor Sir Keith Joseph, who was Secretary of State for Education and Science at the time. She went into that meeting armed with one of her graphs. According to Coleman, once he had seen this graph he was convinced and immediately 'alerted' the Cabinet. Coleman and her science began to circulate more widely in Conservative political spheres. In the same year she was invited to address the Conservative Party's Spring Meeting, attended by Thatcher's then Housing Advisor, William Waldegrave. Again, Coleman recounts, just one hearing of her lecture sent him reporting back to Thatcher.

Finally, Alice Coleman was invited to meet face to face with Margaret Thatcher. In Coleman's narrative of her science in (policy) action she places this meeting centre-stage: It happened in Downing Street in January 1988. Present were Coleman, Thatcher and two advisors (one of whom was William Waldegrave). Coleman was given an entire half hour. In Guest (1990) Coleman reflects that '[s]he [Thatcher] was very business-like, I was quite amazed by her speed of thinking'. Coleman recollects with precision and pride her own performance:

> I had been warned she might grill me, but she does not grill you. She only grills you if you do not know the answers. I had 35 man-years of research behind me and so I knew my stuff and I handled her questions (Coleman interview, London 2008).

Once again Coleman turned to her scientific 'facts' to make her case. In contrast to her earlier meeting, Coleman did not take an actual graph with her on that day, but she nonetheless had to hand an inscription of sorts. She began to draw a graph in the air in order to demonstrate to Thatcher the scientific basis of her arguments. It was, she reflected, 'a sort of invisible visual' (Coleman interview, London, 2010):

> I was at one point drawing a graph in the air and I said 'I liked graphs', and she [Thatcher] joked back, so did she (Coleman interview, London, 2008).

Coleman recalls this as a moment of recognition and persuasion, based on their shared commitment to a scientific model of thinking:

10 Other members of Prince Charles's shifting 'kitchen cabinet' of advisers included characters such as Lady Rusheen Wynne-Jones, of the preservationist group The Londoners Society, and Jules Lubbock, architectural critic of the left-wing *New Statesman* (Raines, 1988).

> Remember, she was a scientist . . . It appealed to her because it was something which was really backed up. She had read the book, she knew what it was about and she was asking supplementary questions (Coleman interview, London, 2008).

Convinced by Coleman's 'invisible visible', Thatcher allied with her science, or at least with what her science might serve. As Coleman put it, '[s]he was very keen on it' (Coleman interview, London, 2008). Thatcher 'got straight to the point' and asked Coleman, 'what do you want?' Coleman specified 5 years of financial support for trialling methods for design improvement. According to Coleman, in that very meeting Thatcher asked her when she could leave her job at King's College London and start, the idea being that Coleman and her team would attach to either the Home Office or the DoE. Coleman's re-telling imposes upon this encounter a sense of urgency: 'Two days later I got a letter from her, telling me to see Nicholas Ridley, then Environment Secretary. From then on it was in the bag, just a matter of waiting' (interview in Guest, 1990: 20).

John Harvey, then head of the Environment Agency in the DoE, similarly recalls the direct manner in which government endorsement materialized:

> I got a phone call one day from the Secretary of State's office: 'Oh, Professor Alice Coleman is here with the Minister (Nicholas Ridley), can you come up?' Ridley said: 'John, you can take Professor Coleman and explain to her how we're going to run this . . . I'll fill you in later.' Coleman said: 'Right, it's been decided that I'm running this project, and I'll need £150 [sic] million.' So it was they had this plan and Mrs Thatcher said Alice Coleman needs the money because it's such an important social experiment, we must test it and see if it works, it's going to have a huge impact . . . So she [Thatcher] said: 'How much does it cost to renovate an estate, say a typical 1,000-dwelling estate?' . . . 'Oh, you know, £10 million.' 'We need to have ten of these,' she said. So we're looking at £100 million, or whatever. Figures plucked out of the air! So I was told to find £150 million for Coleman, and the idea was it would come out of the estate action budget (excerpt from interview undertaken by Elanor Warwick, London, 2011).

The meeting of minds between Thatcher and Coleman can be seen as an instance of what Allen (2004: 28) refers to as power as 'seduction'. Coleman's science may have dealt in the currency of calculation, but she engaged in a conscious and populist discourse of persuasion (see Lipman and Harris, 1988, for a critique of this).

Subsequently both Sir Keith Joseph and then Michael Heseltine were to visit Coleman at King's College London, where she showed them her work. Roma Beaumont (the Geography Department's cartographer at the time) recollects that the departmental seminar room was set up with various large displays showing Coleman's results and again featuring her persuasive trend lines (Beaumont interview, London, 2011).

A short time later, through a very skeptical DoE, Thatcher's promised financial support materialized. The £50 million grant was to facilitate the creation of what Nicholas Ridley called the Design Improvement Controlled Experiment (DICE).[11] DICE and its activities comprised only one strand of a wider shift in central-government housing resources to estate refurbishment: from £45 million in 1986–87 to £373 million in 1994–95 (Lund, 1996: 128). In DICE, a multidisciplinary team led by

11 Interestingly, Coleman refers to DICE as Design Improvement Care for the Environment (see, for example, Coleman, 2009).

Coleman was to work closely with architects and embed her 'corrective measures' for design disadvantagement into the physical fabric of seven selected estates in London (see Coleman *et al.*, 1988, Coleman, 1992). The first estate to undergo design improvement was the Mozart Estate in Westminster, where four overhead walkways were removed in order to break up a string of 23 linked blocks. According to DICE, the local beat police reported that this change 'resulted in a sudden 55% drop in the burglary rate'.[12]

The emergence of DICE marked an irrefutable institutional and material instantiation of Coleman's translation of Newman's urban design methods. Yet this happened in a sceptical, even resistant, bureaucratic context and most certainly against the advice of the then Secretary of State, George Younger, who, one academic commentator suggests, got 'handbagged' by Thatcher (excerpt from interview undertaken by Elanor Warwick, London, 2011, with Paul Wiles, Professor of Criminology at Sheffield University at the time). Certainly, the final sum to come to Coleman was somewhat short of initial promises, suggesting that the civil servants of Whitehall had some moderating effect. Furthermore, although Thatcher had promised Coleman access to crime statistics so that her science could better replicate that of Newman's, these were never forthcoming from the police. As soon as they were able to do so, the DoE subjected DICE and its findings to an independent evaluation, conducted by Price Waterhouse (DoE, 1991). That (somewhat political) report concluded that Coleman's design improvements had only a moderate impact and were neither cost-effective nor proven (see also Osborn and Shaftoe, 1995, for a critique of DICE).

Mediating defensible space on the move

We can see in Coleman's account of her science entering policy that powerful elites played a central role and, in Coleman's and others' accounting, so did Prime Minister Thatcher herself. As Thatcher was later to recall:

> I went further than the DoE in believing that the design of estates was crucial to their success and to reducing the amount of crime. I was a great admirer of the works of Professor Alice Coleman and I had made her an advisor to the DoE, to their dismay (Thatcher, 1993: 605).

As is clear from this quote, it was not merely a mutual recognition among kindred scientific spirits that resulted in Thatcher's political power and resources endorsing Coleman's science. There were important synergies between the underpinning values of Coleman's science and that of the British Conservative government. That synergy rested on a resonate perception that the inner city was a 'problem' and a mutual belief in ownership (privatization) and self-management of conduct (responsibilization). By the 1970s the Keynesian welfare state was in the grip of an ideological and political crisis, one that was reflected in and expressed through public housing. Thatcherism resulted in a move towards a national neoconservative agenda, which sought to shift towards an entrepreneurial urbanism grounded in the private sector, privatization of public assets and public–private partnerships. Thatcherism marked an ideological shift

12 Stage 111 Design Improvement proposals, 1992, DICE Consultancy, King's College London, Alice Coleman's team, see http://transact.westminster.gov.uk/CSU/Policy_and_Scrutiny_Committees/Archived_Scrutiny_Committees/Community_Safety/15_June_2009/Item%204_Appendix.pdf.

wherein the welfare state was transformed from being a remedy for social problems to part of their cause. For example, the growth in poverty and criminality were seen to be the result of a 'culture of dependency' sustained by the welfare state. Relatedly, the social collectivist philosophy that accompanied the welfare state was increasingly seen as undermining an entrepreneurial culture which, Conservatives would claim, had once made Britain great. From the late 1970s onwards much of the utopianism of an earlier period of social planning associated with public housing was viewed with a reluctant cynicism not only by Conservatives but also by many Social Democrats and there was, by the late 1970s, an endemic delegitimization of council housing.[13] One of the first policy changes effected by Margaret Thatcher when she became Prime Minister was the Housing Act of 1980, which among other things gave tenants in council property the right to buy their home. Right to Buy policy had a multi-edged logic. It enacted one of the many privatization schemes to feature in Thatcher's era, and some have argued its 'most significant' (Jones and Murie, 2006: 1). Within 5 years a million council and new town dwellings were sold at discounted prices, and in the course of the 1980s homeownership rose from 54% of dwellings in 1979 to 67% in 1990 (Williams, 1992: 166). As a result of that, Right to Buy achieved another Thatcher goal, which was to shrink the power of the state (and particularly the responsibility of local authorities) in relation to housing. Within the sphere of national housing policy there was already consensus that the state should pull back its role in housing supply, such that private ownership became the major tenure type. By the 1980s state housing authorities could no longer cope with the maintenance and management of existing public-sector housing stock. Alice Coleman's critique of council estates fitted well with the Thatcher project of privatization, her rejection of (socialist) modernist architecture, and her ideas about responsibilization through ownership.[14] In many respects, when these two women recognized each other through the graph in the air, what they saw was a commonly held conservativism. Peter King (2010: 17), the Conservative 'housing philosopher' and long-time associate of the free-market think-tank the Institute of Economic Affairs, has recently argued that Right to Buy policy was grounded in small-'c' conservativism, 'which places at its centre the desire to keep things close and maintain control over our immediate environment' and so 'accords with human nature'. Certainly, this interpretation reiterates the essentialist assumptions about human territorial instincts that underscored Newman's work and Coleman's translation of it. But Coleman's science was equally grounded in other conservative principles, those of entrepreneurialism and responsibilism. For example, in an earlier work on inner-city decline, Coleman (1980: 4) argued that crime was a perverse expression of 'self-interest' in an era marked by 'the decline of entrepreneurship . . . that harmonizes with the common good'. It seems, then, that the aspiration of Coleman's efforts to have her science serve society was not merely to eradicate design disadvantagement, but to prepare the way for a more responsible and entrepreneurial future. Indeed, many of the physical interventions her team made to estates with respect to reducing the number of shared entrances and common spaces, quite literally privatized the fabric and territory of multi-unit estates and in so doing created a built environment more readily aligned with Right to Buy. It is within the medium of small-'c' conservativism and big-'C' Conservativism that Coleman's science found its home.

13 For example, although Thatcher created many radical housing-policy changes, in many cases the course towards these changes – including housing privatization – had been set in earlier Labour government policy (Jones and Murie, 2006).

14 It can also be attributed to Coleman's influence that the Conservatives focused on structural investment in estate action and more recently Coleman's continued influence can be seen in the regeneration of the Holly Street Estate in Hackney (see Lowenfeld, 2008).

Conclusions

Unlike much recent work on policy mobilities that positions them as something new and indicative of the contemporary rise in reflexive governance, an accelerated transnationalization of policy norms and practices, and the increased mobility of policy techniques and policymakers, this study shows that policy mobilities are not new. There are urban histories of the transfer and translation of policy (and pre-policy) ideas and these happened during quite different political contexts and at a different speed to the fast policy transfers that now seem to characterize neoliberal urban governance.

Our account of the movement of Oscar Newman's science of defensible space and its realization in London in the 1980s shows that this was not a smooth model of 'transfer', whereby one well-formed and immutable concept transferred from one jurisdiction to another. As Peck and Theodore (2010a: 170) note, 'mobile policies rarely travel as complete "packages", they move in bits and pieces — as selective discourses, inchoate ideas, and synthesized models — and they therefore "arrive" not as replicas but as policies already-in-transformation'. Coleman acted as a 'transfer agent' (Stone, 2004) for the movement of the concept of defensible space from New York to London; this was not replication, though — rather, it was non-linear reproduction very much linked to the political medium in which these sciences were in action. For example, by the time Coleman's version of defensible space was attracting interest and investment, Newman's project was, as Coleman put it (interview, 2008), 'a bit chastened'. However, as Towers (2000: 114) notes, Newman's work was more diminished than eclipsed by its controversial take-up by Coleman.

Our study offers insight into the messy and often serendipitous mechanisms of such mobilities in the context of Thatcher's Britain — which has a special place in the historical understanding of neoliberalism. The defensible space principle was not bound and packaged as a policy, which then travelled through borrowing, mimesis or learning, be it from government to government, city to city, or administration to administration. Rather, it travelled, in the first instance, within a model of scientific enquiry from one academic context to another, from one inner-city laboratory to another, from one charismatic and controversial scholar to another.

Although an ambivalent and rarely mentioned part of the history of urban geography, defensible space has relevance for thinking about the relationship between science and the public sphere, and the growing emphasis under the previous New Labour administration on 'evidence-based policy making' (Cabinet Office, 1999). This account of Coleman's science in (policy) action shows 'policy-based evidence' rather than 'evidence-based policy'. Politicians design the policy first, then collect the evidence to support it. Academics are not really in control of 'impact', nor is social scientific knowledge transfer simply about the robustness of the social science; rather, it is very much about the politics of the moment. The concept of defensible space had hegemonic compatibility with Thatcherism and as such was 'ideologically anointed or sanctioned' (Peck and Theodore, 2010a: 171). It moved from science to policy not so much because it was factual, but because it passed through what Kingdon (1995) calls a 'policy window'. Indeed, our study shows that in some cases transfer can happen outside of, and often in the face of, bureaucratic disinterest and disapproval. Staeheli and Mitchell (2005) have argued that what makes (geographical) research relevant cannot be separated from questions of why the research should be relevant, how research becomes relevant, the goals of research, and for whom it is intended to be relevant. In this sense, the determination of relevance is a social and political process. We should not then assume that quality (detailed and rigorous empirical work), socially relevant (an unquestioning relevance to the policy realm) geography can (and ought to) influence policy (see also Rogers, 2005).

Arguably, Alice Coleman had one of the greatest policy impacts on British human geography in the 1980s and 1990s. She certainly is at the top, or very near to the top in terms of the research income she generated — well over £50 million! Yet her academic reputation was much less influential, and in the recent history of geography she barely appears at all. The oft cited academic success stories of the 1980s and 1990s in geography are Marxist critical theorists, yet they were, for the most part, a public-policy failure. We can thus contrast academically influential but impact-light theoretical work with work that fared poorly in the peer-review process but found its political moment and became high-impact.

Coleman's work on defensible space had 'impact' because there was nascent support for the idea (driven by political demand), but it would likely never have gotten that far without the transfer agent herself — Alice Coleman. Here we can see that social scientific knowledge transfer can also be associated with the 'cult of personality', as seen in the more recent story of the influential personality scholar Richard Florida.[15] Coleman is a determined woman who is full of self-belief and who believed wholeheartedly in the concept of defensible space and the veracity of her design disadvantagement science. She took great strides to make her science heard and was very successful. The critiques of her work at the time were no less ideologically driven than her work itself.

By situating an urban social science and by charting the way in which personality-driven social science develops and travels we have helped to uncouple the assumption that 'research equals evidence' (Duncan, 2005) and that the best research gets funded. Furthermore, we advance Pratt's (2004: 736) call for inquiry into the 'national and indeed specific urban cultures of academic influence within policy debate'. This is important in terms of the UK higher-education 'impact agenda', where ideologically aligned scholarship is linked into both research funding and policy contexts.

In a 2010 blog, Alice Coleman wrote:

> Someone suggested that DICE would be just as illusory as Modernism but there is a fundamental difference. Modernism was untested speculation by people trying to make a name for themselves, but DICE is based on multiple strands of hard scientific evidence. Margaret Thatcher would have spread DICE principles universally, but Labour seems wilfully ignorant and one of its methods of increasing crime has been raising the proportion of flats in new dwellings to 55%. As flats come to outnumber houses, they even undermine house-dwellers' coping ability, and several people admonishing tearaways outside their homes have been killed. It is good that London's Mayor, Boris Johnson, favours houses with gardens.[16]

She stands by her science, her geography!

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15 Richard Florida is an influential urban-studies scholar who has forwarded the idea of the creative class and offered expert advice on how cities can draw on this concept in urban regeneration (Florida, 2005).

16 See http://www.singleaspect.org.uk/?p=2363; also cited in Coleman, 2009: 12.

References

Allen, J. (2004) The whereabouts of power: politics, government and space. *Geografiska Annaler: Series B, Human Geography* 86.1, 19–32.

Balchin, W. (1980) Foreword. In A. Coleman and J. Shaw (eds.), *Field mapping manual: Second Land Utilisation Survey*, King's College London, Dowland Press, London.

Barnes, T. (2002) Performing economic geography: two men, two books, and a cast of thousands. *Environment and Planning A* 34.3, 487–512.

Barnes, T. (2004a) A paper related to everything but more related to local things. *Annals of the Association of American Geographers* 94.2, 278–83.

Barnes, T. (2004b) Placing ideas: genius loci, heterotopia and geography's quantitative revolution. *Progress in Human Geography* 28.5, 565–95.

Barnes, T. (2006) Geographical intelligence: American geographers and research and analysis in the Office of Strategic Services 1941–1945. *Journal of Historical Geography* 32.1, 149–68.

Barnes, T. and Farish, M. (2004) Between regions: science, militarism, and American geography from world war to cold war. *Annals of the Association of American Geographers* 96.4, 807–26.

Bellush, J. and D. Netzer (1990) *Urban politics: New York style*. M.E. Sharpe, New York, NY.

Berg, B. (2007) *New York City politics: governing Gotham*. Rutgers University Press, Piscataway, NJ.

Brecher, C., R. Horton, R. Cropf and D.M. Mead (1993) *Power failure: New York City politics and policy since 1960*. Oxford University Press, Oxford.

Brenner, N. and N. Theodore (2002) Cities and the geographies of 'actually existing neoliberalism'. *Antipode* 33.3, 349–79.

Brenner, N., J. Peck, and N. Theodore (2010) Variegated neoliberalization: geographies, modalities, pathways. *Global Networks* 10.2, 1–41.

Brown-May, A. (2008) In the precincts of the global city: the transnational network of municipal affairs in Melbourne, Australia, at the end of the nineteenth century. In P.-Y. Saunier and S. Ewen (eds.), *Another global city: historical explorations into the transnational municipal movement, 1850–2000*, Palgrave Macmillan, Basingstoke.

Burawoy, M. (2004) Public sociologies: contradictions, dilemmas and possibilities. *Social Forces* 82, 1–16.

Burawoy, M. (2005) The critical turn to public sociology. *Critical Sociology* 31.3, 313–26.

Cabinet Office (1999) *Professional policy making for the twenty first century*. Report by the Strategic Policy Making Team, Cabinet Office, London.

Callon, M. (1991) Techno-economic networks and irreversibility. In J. Law (ed.), *A sociology of monsters: essays on power, technology and domination*, Routledge, London.

Campbell, J. (2002) Ideas, politics and public policy. *Annual Review of Sociology* 28, 21–38.

Castree, N. (2006) Geography's new public intellectuals. *Antipode* 38.2, 396–412.

Chamberlain, M. and S. Leydesdorft (2004) Transnational families: memories and narratives. *Global Networks* 4.3, 227–41.

Clarke, N. (2010) Town twinning in cold-war Britain: (dis-)continuities in twentieth-century municipal internationalism. *Contemporary British History* 24.2, 173–91.

Clarke, N. (2012) Urban policy mobility, anti-politics, and histories of the transnational municipal movement. *Progress in Human Geography* 36.1, 25–43.

Coleman, A. (1980) The death of the inner city: cause and cure. *The London Journal* 6.1, 3–21.

Coleman, A. (1985) *Utopia on trial: vision and reality in planned housing*. Hilary Shipman Publishing, London.

Coleman, A. (1992) The DICE project. *Housing and Town Planning Review*, National Housing and Town Planning Council, London.

Coleman, A. (2009) The psychology of housing. *The Salisbury Review: the Quarterly Magazine of Conservative Thought* 28.2, 10–12.

Coleman, A. and J. Shaw (1980) *Field mapping manual: Second Land Utilisation Survey*. King's College London, Dowland Press, London.

Coleman, A., D. Coleman, P. Beresford, T. Melville-Ross (1988) *Altered estates*. Adam Smith Institute, London.

Cook, I. (2008) Mobilising urban policies: the policy transfer of US Business Improvement Districts to England and Wales. *Urban Studies* 45.4, 773–95.

DoE (1991) *The design improvement controlled experiment (DICE): an evaluation of the impact, costs and benefits of estate re-modelling*. DOI:10.1068/a3440, Price Waterhouse, London.

Dolowitz, D. (1998) *Learning from America: policy transfer and the development of the British workfare state*. Sussex University Press, Brighton.

Domosh, M. (1991) Toward a feminist historiography of geography. *Transactions of the Institute of British Geographers* 16.1, 95–104.

Duncan, S. (2005) Towards evidence-inspired policy making. *Social Sciences* 61 (September), 10–11.

Florida, R. (2005) *Cities and the creative class*. Routledge, London and New York, NY.

Freeman, R. (2012) Reverb: policy making in wave form. *Environment and Planning A* 44.1, 13–20.

Fuller, D. (2008) Public geographies: taking stock. *Progress in Human Geography* 32.6, 834–44.

Gieryn, T.F. (2006) City as truth-spot: laboratories and field sites in urban studies. *Social Studies of Science* 36.1, 5–38.

González, S. (2011) Bilbao and Barcelona 'in motion': how urban regeneration 'models' travel and mutate in the global flows of policy tourism. *Urban Studies* 48.7, 1397–418.

Gregory, D. (2000) Cultures of travel and spatial formations of knowledge. *Erdkunde: archive for scientific geography* 54.4, 297–319.

Guest, P. (1990) Utopia goes on trial. *Building* 23 November, 20–22.

Harvey, D. (1989) From managerialism to entrepreneurialism: the transformation of urban governance in late capitalism. *Geografiska Annaler: Series B, Human Geography* 71.1, 3–17.

Harvey, D. (2007) Neoliberalism and the city. *Studies in Social Justice* 1.1, 2–13.

Harwood, E. and A. Powers (eds.) (2008) *Housing the twentieth-century nation*. The Twentieth Century Society, London.

Healey, P. and R. Upton (eds.) (2010) *Crossing borders: international exchange and planning practices*. Routledge, London and New York, NY.

Hillier, B. (1986) City of Alice's dreams. *The Architects' Journal* 9 July, 39.

Hoyt, L. (2006) Imported ideas: the transnational transfer of urban revitalization policy. *International Journal of Public Administration* 29.1/3, 221–43.

Jayne, M., P. Hubbard and D. Bell (2011) Worlding a city: twinning and urban theory. *City* 15.1, 25–41.

Jones, C. and A. Murie (2006) *The Right to Buy: analysis and evaluation of a housing policy*. Blackwell and RICS Research, Oxford.

Keighren, I. (2010) *Bringing geography to book: Ellen Semple and the reception of geographical knowledge*. I.B. Tauris, London.

King, A. (1980) Exporting planning: the colonial and neo-colonial experience. In G. Cherry (ed.), *Shaping an urban world: planning in the twentieth century*, Palgrave Macmillan, Basingstoke.

King, A. (1984) *The bungalow: the production of a global culture*. Routledge & Kegan Paul, London.

King, A. (2004) *Spaces of global culture: architecture, urbanism, identity*. Routledge, London and New York, NY.

King, P. (2010) *Housing policy transformed: the right to buy and the desire to own*. The Polity Press, Bristol.

Kingdon, J. (1995) *Agendas, alternatives, and public policies*. Second edition, Longman, New York, NY.

Kong, L., C. Gibson, L-M. Khoo and A.-L. Semple (2006) Knowledges of the creative economy: towards a relational geography of diffusion and adaptation in Asia. *Asia Pacific Viewpoint* 4.2, 173–94.

Larner, W. and N. Laurie (2010) Travelling technocrats, embodied knowledges: globalising privatisation in telecoms and water. *Geoforum* 41.2, 218–26.

Latour, B. (1987) *Science in action: how to follow scientists and engineers through society*. Harvard University Press, Cambridge, MA.

Law, J. and V. Singleton (2000) *This is not an object*. Centre for Science Studies and the Department of Sociology, Lancaster University, [WWW document]. URL http://www.comp.lancaster.ac.uk/sociology/soc032jl.html (accessed 2 August 2012).

Lipman, A. and H. Harris (1988) Dystopian aesthetics — a refusal from nowhere.

In N. Teymur, T. Markus and T. Wooley (eds.), *Rehumanising housing*, Butterworth, London.

Livingstone, D. (1992) *The geographical tradition*. Blackwell, Oxford.

Livingstone, D. (1995) The spaces of knowledge: contributions towards a historical geography of science. *Environment and Planning D: Society and Space* 13.1, 5–34.

Livingstone, D. (2003) *Putting science in its place: geographies of scientific knowledge*. University of Chicago Press, Chicago, IL.

Lorimer, H. (2003) Telling small stories: spaces of knowledge and the practice of geography. *Transactions of the Institute of British Geographers* 28.2, 197–217.

Lowenfeld, J. (2008) Estate regeneration in practice: the Mozart Estate, Westminster, 1985–2004. In E. Harwood and A. Powers (eds.), *Housing the twentieth-century nation*, The Twentieth Century Society, London.

Luckman, S., C. Gibson and T. Le (2009) Mosquitoes in the mix: how transferable is creative city thinking? *Singapore Journal of Tropical Geography* 30.1, 70–85.

Lund, B. (1996) *Housing problems and housing policy*. Longman, London and New York, NY.

Lowry, S. (1990) Families and flats. *British Medical Journal* 300 (January), 245–47.

Maddrell, A. (2009) *Complex locations: women's geographical work in the UK, 1850–1970*. Wiley-Blackwell, Oxford.

Masser, I. and R. Williams (1986) *Learning from other countries: the cross-national dimensions in early policy making*. Routledge, London.

Mayhew, P. (1979) Defensible space: the current status of a crime prevention theory. *The Howard Journal of Criminal Justice* 18.3, 150–59.

McCann, E.J. (2008) Expertise, truth, and urban policy mobilities: global circuits of knowledge in the development of Vancouver, Canada's 'four pillar' drug strategy. *Environment and Planning A* 40.4, 885–904.

McCann, E. (2011) Urban policy mobilities and global circuits of knowledge: toward a research agenda. *Annals of the Association of American Geographers* 101.1, 107–30.

McCann, E. and K. Ward (2010) Relationality/territoriality: toward a conceptualization of cities in the world. *Geoforum* 41.4, 175–84.

McCann, E. and K. Ward (eds.) (2011) *Mobile urbanism: cities and policy-making in the global age*. University of Minnesota Press, Minneapolis, MN.

McCann, E.J. and K. Ward (2012) Assembling urbanism: following policies and 'studying through' the sites and situations of policy making. *Environment and Planning A* 44.1, 42–51.

McFarlane, C. (2010) The comparative city: knowledge, learning, urbanism. *International Journal of Urban and Regional Research* 34.4, 725–42.

McFarlane, C. (2011) *Learning the city: knowledge and translocal assemblage*. Wiley-Blackwell, Oxford.

McNeill, D. (2009) *The global architect: firms, fame, and urban form*. Routledge, London and New York, NY.

Montgomery, S. (2002) *Science in translation: movements of knowledge through cultures and time*. University of Chicago Press, Chicago, IL.

Moore, S. (2010) 'More Toronto, naturally' but 'too strange for Orangeville': deuniversalizing New Urbanism in greater Toronto. *Cities* 27.2, 103–13.

Murie, A. (1997) Linking housing changes to crime. *Social Policy and Administration* 31.5, 22–36.

Nasr, J. and M. Volait (eds.) (2003) *Urbanism: imported or exported? Native aspirations and foreign plans*. Wiley-Academy, Chichester.

Newman, O. (1972) *Defensible space: crime prevention through urban design*. Macmillan, New York, NY.

Newman, O. (1976) *Design guidelines for creating defensible space*. Washington National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, US Department of Justice, Washington, DC.

Newman, O. (1996) *Creating defensible space*. US Department of Housing and Urban Development Office of Policy Development and Research, Washington, DC.

Ophir, A. and S. Shapin (1991) The place of knowledge: a methodological survey. *Science in Context* 4.1, 3–22.

Osborn, S. and H. Shaftoe (1995) *Successes and failures in neighbourhood crime prevention*, Joseph Rowntree Foundation [WWW document]. URL http://www.jrf.org.uk/publications/

successes-and-failures-neighbourhood-crime-prevention (accessed 10 August 2013).

Peck, J. (2002) Political economies of scale: fast policy, interscalar relations, and neoliberal workfare. *Economic Geography* 78.3, 331–60.

Peck, J. (2005) Struggling with the creative class. *International Journal of Urban and Regional Research* 29.4, 740–70.

Peck, J. and N. Theodore (2010a) Mobilizing policy: models, methods, and mutations. *Geoforum* 41.2, 169–74.

Peck, J. and N. Theodore (2010b) Recombinant workfare, across the Americas: transnationalizing 'fast' welfare policy. *Geoforum* 41.2, 195–208.

Peck, J. and N. Theodore (2012) Follow the policy: a distended case approach. *Environment and Planning A* 44.1, 21–30.

Pickering, A. (1992) *Science as practice and culture*. University of Chicago Press, Chicago, IL.

Pratt, G. (2004) Urban prospects. *Urban Geography* 25.8, 735–37.

Raines, H. (1988) Defying tradition: Prince Charles recasts his role. *The New York Times Magazine*, 21 February [WWW document]. URL http://www.nytimes.com/1988/02/21/magazine/defying-tradition-prince-charles-recasts-his-role.html?pagewanted=all&src=pm (accessed 8 October 2012).

Rein, M. (1980) Methodology for the study of the interplay between social science and social policy. *International Social Science Journal* 32.2, 361–68.

Rogers, A. (2005) A policy-relevant geography for society? In N.A. Castree, A. Rogers and D. Sherman (eds.), *Questioning geography*, Blackwell, Oxford.

Roy, A. and A. Ong (eds.) (2011) *Worlding cities: Asian experiments and the art of being global*. Wiley-Blackwell, Oxford.

Rycroft, S. and D. Cosgrove (1995) Mapping the modern nation: Dudley Stamp and the Land Utilisation Survey. *History Workshop Journal* 40.1, 91–105.

Saunier, P.-Y. (1999a) 'Atlantic crosser': John Nolen and the Urban Internationale. *Planning History* 21.1, 423–31.

Saunier, P.-Y. (1999b) Changing the city: urban international information and the Lyon municipality, 1900–1940. *Planning Perspectives* 14.1, 19–48.

Saunier, P.-Y. (2002) Taking up the bet on connections: a municipal contribution. *Contemporary European History* 11.4, 507–27.

Saunier, P.-Y. and S. Ewen (eds.) (2008) *Another global city: historical explorations into the transnational municipal movement, 1850–2000*. Palgrave Macmillan, Basingstoke.

Smith, C. and J. Agar (1998) Introduction. In C. Smith and J. Agar (eds.), *Making space for science: territorial themes in the shaping of knowledge*, Macmillan, London.

Smith, K. (2010) Research, policy and funding: academic treadmills and the squeeze on intellectual spaces. *The British Journal of Sociology* 61.1, 176–95.

Smith, S. (1986) Review of *Utopia on Trial*. *Urban Studies* 23.3, 244–46.

Spicker, P. (1987) Poverty and depressed housing estates: a critique of *Utopia on Trial*. *Housing Studies* 2.4, 283–92.

Staeheli, L. and D. Mitchell (2005) The complex politics of relevance in geography. *Annals of the Association of American Geographers* 95.2, 357–72.

Stone, D. (2004) Transfer agents and global networks in the 'transnationalization' of policy. *Journal of European Public Policy* 11.3, 545–66.

Sturman, A. and S. Wilson (1976) Vandalism research aimed at specific remedies. *Municipal Engineering* 7 May. [6]

Tait, M. and O. Jensen (2007) Travelling ideas, power and place: the cases of urban villages and business improvement districts. *International Planning Studies* 12.2, 107–28.

Teymur N., T. Markus and T. Wooley (eds.) (1988) *Rehumanising housing*. Butterworth, London.

Thatcher, M. (1993) *The Downing Street years*. Harper Collins, London.

The Architects' Journal (1990) Colemanisation goes on trial. 9. [7]

Thompson-Fawcett, M. (2003) A new urbanism diffusion network: the Americo-European connection. *Built Environment* 29.3, 253–70.

Till, J. (1998) Architecture of the impure community. In J. Hill (ed.), *Occupations of architecture*, Routledge, London.

Towers, G. (2000) *Shelter is not enough: transforming multi-storey housing*. The Policy Press, Bristol.

Wang, J. (2004) The global reach of a new discourse: how far can 'creative industries' travel? *International Journal of Cultural Studies* 7.1, 9–19.

Ward, K. (2006) 'Policies in motion', urban management and state restructuring: the trans-local expansion of Business Improvement Districts. *International Journal of Urban and Regional Research* 30.1, 54–75.

Ward, K. (2007) Business Improvement Districts: policy origins, mobile policies and urban liveability. *Geography Compass* 1.3, 657–72.

Ward, S. (1999) The international diffusion of planning: a review and a Canadian case study. *International Planning Studies* 4.1, 53–77.

Ward, S. (2000) Re-examining the international diffusion of planning. In R. Freestone (ed.), *Urban planning in a changing world: the twentieth century experience*. E & FN Spon, London.

Ward, S. (2010) Transnational planners in a postcolonial world. In P. Healey and R. Upton (eds.), *Crossing borders: international exchange and planning practices*, Routledge, London and New York, NY.

Warwick, E. (2009) Defensible space. In R. Kitchen and N. Thrift (eds.), *The international encyclopedia of human geography*, Volume 1, Elsevier, London.

Williams, P. (1992) Housing. In P. Cloke (ed.), *Policy and change in Thatcher's Britain*, Pergamon Press, Oxford.

Withers, C. (2010) *Geography and science in Britain, 1831–1939: a study of the British Association of the Advancement of Science*. Manchester University Press, Manchester.

Wright, P. (2009) *A journey through ruins: the last days of London*. Oxford University Press, Oxford.

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