

Private Finance Initiative Hospital Architecture: Towards a Political-Economy of The Royal Liverpool University Hospital

ABSTRACT

Sociological analysis has done much to illuminate the architectural contexts in which social life takes place. As a subset of this inquiry, research on care environments suggests that the built environment is not to be understood as a passive backdrop relative to the form and quality of healthcare, which is conditioned by the architecture in which care happens. This paper suggests the importance of going beyond the hospital walls to make sense of the politics that see hospital buildings being realised in particular ways at particular times. The article assesses the case of the yet-to-be-realised Liverpool Royal University Hospital, and the Private Finance Initiative (PFI) funding that underpins the scheme, which is suggested as a salient 'external' context for understanding architecture's role vis-a-vis the provision/enactment of healthcare of many kinds for many years to come. PFI has major implications for questions of democratic accountability and local economy, as well as for the architecture of the hospital as a site of care. Critical studies can illuminate these paradoxically visible-but-opaque hospital spaces by going beyond that which is immediately empirically evident, to reveal the ways in which hospital architecture is conditioned by political and economic forces.

INTRODUCTION

Hospital architecture is a site for theoretical and empirical sociological analysis of the ways in which buildings become bound up with care-giving practices (Martin et al, 2015). Reflective of, and sedimenting, particular sets of assumptions and aspirations concerning materialities of care, hospital architecture has been found to affect profoundly the ways in which a range of care practices are embedded and realised (Forty, 1980; Adams, 1999a,

1999b; Devlin and Arneill, 2003; Codhinoto et al, 2008; Cama, 2009; Adams et al, 2010; Bromley, 2012). Accordingly, there is increasing acknowledgement that materialised architectural designs imply and mediate relations between bodies and care practices (Kim and Shelley, 2008; Hignett and Lu, 2009; Adams, 2007; Licourt, 2002; Imrie, 2012; Martin et al, 2015; HKS, nd; NBBJ, nd). Empirical studies reveal a nuanced picture of the ways in which care settings are co-produced by social actions of a whole range of users, including: children (Adams et al, 2010); older patients (Yeh, 2015); pregnant women (Gillespie, 2002); people who are mentally ill (Curtis et al, 2007); people with disabilities (Imrie, 2012); and medical professionals including nurses (Dodd, 2001; Lewis et al, 2009), GPs (Rapport et al, 2007), and surgeons (Adams and Schlich, 2006). Theoretically, interests concern the ways in which architecture, artefacts, and the designed environment reflect and condition the co-production of care.

This paper aims to contribute to the discussion concerning material cultures of care by addressing hospital architecture relative to concerns that ostensibly lie beyond the building's walls. Approaching the hospital building from analysis of political-economic 'forces lying outside of architecture' (Frampton, 1991: 17) by exploring something of the context of the Royal Liverpool University Hospital, a major Private Finance Initiative-funded build. Lines of inquiry concern the hospital vis-a-vis regeneration of the city, the capacity to support healthcare sites outside of this yet-to-be realised architecture, and the anti-democratic nature of the procurement, all of which are controversies that continue to swirl around the building. Situating architecture in its political place means developing an account of that which is ostensibly empirically not present so as to capture the ways in which politics and economics shape the form and function of the hospital.

The paper is in three main parts, plus this Introduction and a Conclusion. Firstly, I survey existing research studies of designed care environments that address architecture's co-constitutive role in healthcare. Secondly, the paper changes tack, turning to the ways in which contemporary hospital architecture in the UK is funded. Addressing the Private Finance Initiative (PFI), this section considers something of the politics associated with this highly contested way of procuring hospital architecture. The central contention emerging here is that researchers interested in the materialities of care must not lose sight of the structural contexts in which hospital architecture is produced.

Thirdly, the case of the Royal Liverpool University Hospital is assessed. Paradoxically, given that it is yet-to-be-realised, this building provides an excellent case to illustrate the central argument of the paper concerning the shaping of hospital architecture by extrinsic forces. PFI materially affects the building in all sorts of ways, some of the key ones are drawn out in the final section. Mired in a series of controversies - that are illuminating of positions wider than architectural-aesthetic ones (Yaneva, 2012) - concerning its form and funding, the implications of PFI for this future element of the built environment is discussed. As a key element of the way that hospital architecture is delivered, PFI suggests the necessity of engaging with questions of politics and power outside of the empirically-present interaction between people and the architectural-hospital object[s].

Central contentions concern the nature of the political relationships that underpin architecture's commission and subsequent use. The approach pursued involves analysing how, for decades to come, what is 'here' - in this case the extant PFI hospital - is affected by, and affects, what is 'there' (Massey, 2004), in the form of other healthcare provision and the politics of resourcing public infrastructure. This is not the same as studying a standardised process of 'neo-liberalism' unfolding inevitably, but rather rests on the

assumption that 'place matters' for architecture, as it does for capitalism; both take specific forms that reveal much concerning how its procurement are left manifest on the hospital long after the architects have left the stage. The paper suggests the necessity of situating buildings in their political and economic place (Jones, 2009; 2011).

Section One: Hospital Architecture and Material Cultures of Care

Working with an 'expanded conceptualisation of landscape', which is taken to mean 'a combination of physical features [bearing] the imprint of human occupation, the result of an ever-changing interplay', Wilbert Gesler (1992: 736) analyses the implications of designed objects for the co-construction of care contexts. His studies of the combinations of human and non-human actors that combine to constitute 'therapeutic landscapes' (Gesler, 1992; Gesler et al, 2004; Curtis et al, 2007) interrogate the practical character of healthcare settings. Addressing how technological artefacts become entangled with care practices, from this perspective architecture is a constituent factor that shapes the interactions that exist in and around it (for a survey of this research see Devlin and Arneill 2003; Ulrich and Zimring, 2009).

In a series of important contributions, Annmarie Adams studies architecture vis-a-vis prevailing understandings of health and illness (1999a; 1999b; 2007; Adams and Burke, 2006; Adams and Schlich, 2006; Adams et al, 2010). Unpacking the relationship between the designed environment, medical practices, and social order, she suggests that desired changes in care are often signalled by/go hand-in-hand with architectural reorganisations. Social space in hospitals is demarcated more sharply than in other building types (Prior, 1988; Curtis et al, 2007: 594-5), so architectural 'additions and subtractions' (Adams, 1999a: 37) clearly reflect understandings of care particular to time and space. Illustrating this point, during wartime the temporary transformation of schools and large domestic

residences into hospitals reveals medical assumptions (1999a: 37). Similarly, the architectural organisation of tuberculosis hospitals' wards in the mid-nineteenth century materialised something of medical knowledge concerning the disease's diagnosis and treatment (Adams and Burke, 2006). Or, the changing therapeutic status of rest and exercise underpinned assumptions concerning the design of sanatoria; during the late nineteenth century these often mimicked contemporaneous middle-class US domestic interiors, as prevailing medical discourses attached health benefits to hospital spaces that looked and feel non-institutional (Adams, 2007).

Hospital architecture is subject both to moments of architectural experimentation and of stability, when there is relatively settled consensus concerning the form and function of its materiality. Accordingly, healthcare architects must make legible their projections for how care will happen (Prior, 1988; Yaneva, 2012), especially when turning a building that is not currently a hospital into one (Adams, 1999a). Then, ostensibly prosaic issues become entangled with range of 'medical' interpretations. In the multi-storey designs of modernist hospitals, high ceilings were understood by architects and medics as technological advancements *contra* to earlier dark interiors; the therapeutic benefit of natural light, and fresh air in hospitals were celebrated, including in a major Royal Institute of British Architects report, despite at the same time solaria and balconies were being removed (Hughes, 2000: 26-32). Further reflecting how extrinsic factors shape hospital architecture, the stricter gendering of medical space saw 'Nightingale' open wards falling from favour by the 1930s, when pseudo-privatisation of wards via screens and curtains had become a norm (Forty, 1980).

It is more difficult to exercise medical authority in 'shacks in the woods' than in hospitals (Adams and Burke, 2006). Eighteenth-century medics actually co-designed the buildings

that became bound up with their project of professionalisation; their assumption was that control over the body happens best in highly-controlled architectural environments, with hospitals mimicking 'lab' conditions to lend authority to diagnostic practices (Forty, 1980: 73-5; Gieryn, 2002; Bartram, nd). Indeed, '[l]aboratory science and its mandates of control and replicability [were] ubiquitous in surgery' (Adams and Schlich, 2006: 319) with affinities between rationalised architectural programmes and shifts in surgical practice combining to shape hospitals. The paradigm of the heroic male surgeon required performativity, with amphitheatres allowing for visibility of the surgeon's skill to student-observers (patients' bodies were rendered passive 'props' therein) (Hughes, 2000: 30).

Such assumptions derive in part from sets of knowledge claims extrinsic to the hospital site itself. Rapid hospital building in Europe in the industrial revolution far outstripped the population growth/ostensible demand for such; hospitals were 'instruments for moral cure', reflecting an elision of good health and political discourse, with expansion making sense only when understood relative to broader wealth-of-the-nation discourses concerning labour power, military force, and charitable 'duty' towards the sick poor (Forty, 1980). In fact the supply of military force as an element of such saw the admiralty becoming commissioners of innovative hospital design, such as at Stonehouse Royal Naval Hospital in Plymouth (Forty, 1980: 65-66).

Correlations between architectural design and medical practice are highly contingent, with 'some scientific discoveries [leading] to changes in design, but others... not' (Forty, 1980: 61). Simply projecting social shifts on to architecture from a reading of technological affordance from afar can lead to misunderstandings of specific embeddings (Gieryn, 2002). If the built environment is to be understood as 'active' (Yaneva, 2012) relative to medical knowledge and practice, and bodies therein (Imrie, 2012; Bartram, nd), then

taken-for-granted of the architectural-spatial form of the hospital are an object of critical investigation.

Assumptions concerning healthcare condition hospital architecture today as they did in the past (Verderber, 2010). From this perspective, the popularity of the atrium in contemporary hospital design warrants unpacking; arbitrary, inasmuch as it could be different, atrium space is bound up with the stacking of stories associated with modernism, so due in part to technical space-to-footprint efficiencies associated with high-rise building are a space that becomes possible (Adams et al, 2010: 661). Atria also provide a spatial centre, facilitating reception and orientation in internally-complicated spaces such as hospitals, where corridors, multiple floors, and restricted access areas can make navigation difficult (Forty, 1980: 70-1). Common in the contemporary new-build hospital, atria bring with them contemporaneous look and feel (described as innovative and fresh by medical staff and architects alike at The Hospital for Sick Children at Toronto (Adams et al, 2010: 661). The 'atmosphere of consumption' of atria spaces reflects their use in shopping malls and hotels, reflecting that contemporaneous hospital design has been 'driven by effective cultural rather than medical models' (Adams et al, 2010: 666; also see Kearns and Barnett, 1997; Adams and Theodore, 2002). Certainly, thanks to a luminous glass ceiling, palm trees, and marble-faced sweeping staircase in its atrium (Boekel, 2008: 82), reception at the UNC Children's and Women's Hospital in North Carolina has more than a passing similarity to a hotel lobby. But there are medical-social implications of the atrium: in their study of paediatric hospitals, Adams et al (2010: 662-3) tease out the affective relationships therein, revealing that anxiety expressed by children who are hospitalised concerning being seen when coming to terms with the social basis of, for example, wheelchair use, is mitigated when in the public-private space of the hospital atrium.

In addition to such closely-observed ethnographic analyses of how architecture becomes incorporated into circuits of care, going beyond the empirically present within the hospital walls is also necessary if we are to make sense of what happens therein; architecture needs to be situated relative to the social worlds that give rise to it (Prior, 1988; Jones, 2009, 2011). Slightly reworking Prior's words, but true I hope to his argument, hospital architecture is a social creation representing 'some order of consciousness and purposeful interaction... [it] constitutes as well as represents social and cultural existence' (Prior, 1988: 90). Decisions to realise buildings are themselves a crucial precursor to social-architectural interactions such as the ones studied above. Put bluntly, hospital architecture is expensive and needs to be funded somehow; the 'how' - frequently a source of controversy (Forty, 1980) - reflects the political and economic conditions of the hospitals' very possibility, and warrants analysis.

Section Two: Hospital Architecture as PFI Matter

A form of public-private partnership that is by now the key mechanism through which governmental infrastructure, including hospitals, is procured, Private Finance Initiative (PFI) is an important context when assessing the healthcare architecture it gave rise to. This section gives a brief summary of some of its implications for hospital architecture (for a more thoroughgoing analysis of PFI and healthcare see Pollock, 1999; Mohan, 2002; Pollock, 2005; Shaoul, 2009, 2011; Pollock et al, 2010; Pollock and Price, 2013).

In effect, PFI is a way of leveraging corporate funding for governing infrastructure, crucially taking capital investment off the public sector balance sheet in the process of financing it; capital spend is no longer visible as borrowing, but rather creates debt, not as current expenditure but as payments over the course of a contract (typically a circa 30-year term). This artificial accounting improvement of public sector borrowing figures allows expensive

new infrastructure, such as hospitals, to be built while sustaining politically-expedient claims for fiscal constraint (Mair and Jones, 2015). The decades-long lifespans, and ring-fenced status, of PFI contractual commitments means that - in spite of recent rebranding of the vehicle as 'PFI 2' - the outcomes of this funding vehicle will remain an enduring feature of the political and architectural landscape for some time to come. As we will see in the case of the Royal Liverpool University Hospital, the material visibility of PFI infrastructure is often at odds with the opaque sets of processes that lead to the commission and realisation of such.

Unsurprisingly, PFI has proven controversial, drawing sustained and evidenced political, academic and public critiques (Pollock, 1999; Mohan, 2002; Pollock et al, 2010; Keep Our NHS Public Merseyside, 2013; Pollock and Price, 2013; Shaoul, 2009, 2011; Mair and Jones, 2015). A key line of critique concerns the poor value for public money represented by PFI, which is 'akin to a multi-billion-pound hire-purchase scheme with servicing arrangements thrown in [...] that comes with all the drawbacks of raised costs but multiplied by its massive scale' (Mair and Jones, 2015: 126). Estimates concerning PFI liability in healthcare are themselves objects of claims-making and obfuscation, with suggestions about refunding varying widely (Pollock, 1995, 2002; Shaoul, 2009), and the Byzantine accounting practices that underpin PFI calculations are best understood as political claims-making rather than objective descriptions.

One reason for difficulty in illuminating the financial arrangements of PFI contracts is that they are typically deemed 'commercially sensitive', meaning they fall outside the scope of freedom of information requests (Pollock, 2005; Pollock and Price, 2013; Pollock et al, 2013). Further, the bundling of capital costs and maintenance contracts - both of which are subject to projections, depreciations, and the selling of derivatives in the contracts - not to

mention a cocktail of public and private responsibilities for such, makes a technically-complex financial relationship more so (Pollock, 1995, 1999; Pollock et al, 2010). So, hospitals developed at the behest of the state but on the basis of restricted contractual agreements and labour relationships established on commercial terms, are shielded from public view (Mair and Jones, 2015: 124). It is the 'submerging' (Mettler, 2011) of political decisions concerning resourcing to high-levels of technical accounting complexity, that denies democratic scrutiny.

The approval to use PFI contract for government infrastructure procurement in the first place comes from the Secretary of State, and is contingent on such representing best value for money for the taxpayer, more on which below. Generally, the cost and funding of hospitals has always proved a hot political topic (Forty, 1980; Prior, 1988; Pollock et al, 2013). Adrian Forty (1980) shows the implications for the mass development of hospital buildings in France and England in the eighteenth and nineteenth century being underwritten financially by private subscription, with benefactors gaining status and the power to vet/nominate patients (Woodward, cited in Forty, 1980: 67). Meanwhile, relatively limited resourcing in the early years of the state-funded NHS made hospital commissions commercially unattractive to architectural firms (Hughes, 2000: 23), whereas today, hospital buildings' profile elevated status within the architectural field, and financially 'sweetened' PFI commissions with guaranteed returns, combine to make hospital contracts extremely attractive to international architectural firms.

The reconfigurations of state-market-society that underpins PFI have particular implications for architecture. PFI is a way that the private sector benefits from the commission of public infrastructure, and the entanglement of an economic profit motive with the creation of a hospital has implications for the form and function of such. The lack

of transparency concerning PFI contracts is starkly at odds with the highly visible form of the hospital architecture produced by their deployment. Should we develop an analytically-satisfactory political-economic account of hospital architecture, we cannot overlook the ways in which '[i]deology doesn't nearly saturate landscapes. It is ubiquitous in buildings as well' (Prior, 1988: 94). This is illustrated clearly by The Royal Liverpool, where the architecture of the hospital has become the site of the generation of surplus value and the embedding of symbolic meaning about such (Massey, 2004). The 'layout, design and styling of buildings can manifest the geographically - and temporally - localized thinking, aspirations and prejudices of their designers and clients' (Hughes, 2000: 21). Indeed, as we will see, the PFI hospital becomes the basis of all sorts of political claims-making concerning the 'selling' of place, regeneration and investment, and architectural iconicity.

Section Three: The Royal Liverpool University Hospital as an Architectural Controversy

Despite its as-yet-unrealised status, the Royal Liverpool University Hospital (herein the Royal Liverpool) allows exploration of the contingencies of entangled political logics that shape the form and function of PFI hospital architecture. Although the building will not open its doors until late 2017, so preventing the conduct of studies of human-material interaction and care co-production such as those discussed in Section One, the hospital has to date been entangled in a variety of 'controversies' (Yaneva, 2012) that illuminate much about contemporaneous taken-for-granted concerns concerning the design and procurement of hospital architecture. Above it was suggested that hospital architecture is shaped by social order that emanates far beyond the walls of the hospital (Forty, 1980; Prior, 1988; Imrie, 2012; Martin et al, 2015). Here this contention is unpacked relative to three lines of inquiry with respect to the Royal Liverpool and: i) the extraction of symbolic and material capital from the 'iconic' architecture of the hospital and the firms designing it and the

insertion of the building into regeneration discourse; ii) the ways in which time matters relative to this hospital design; and iii) the contradiction between what will be a highly visible architectural structure and the opaque nature of the procurement arrangements that brought such about.

Despite having numerous sports stadia, university buildings, and corporate headquarters within their global portfolios, HKS and NBBJ – whom jointly are the architects of the new Royal Liverpool - have become closely associated with hospitals and other healthcare buildings. Both are a major architectural firms, both amongst the biggest in the USA, between them with offices in Beijing, Hong Kong, Sao Paulo and Shanghai amongst other places, and whom have designed many dozens of major hospital buildings the world over. HKS-designed hospitals include: The Melinda French Gates Ambulatory Care Building (Seattle) (which is also designed in conjunction with NBBJ); Abbott Northwestern Heart Hospital (Minneapolis); Washington Regional Medical Center (Arkansas); North Carolina Children's Hospital; McKay-Dee Hospital Center (Utah) (Boekel, 2008: 10-13; 23-5; 31). NBBJ's healthcare portfolio includes the Massachusetts General; the Seattle Children's Hospital; the Miami Valley Heart Clinic; and the Dubai Mall Medical Centre (NBBJ, nd).

The 'layout, design and styling of buildings can manifest the geographically - and temporally - localized thinking, aspirations and prejudices of their designers and clients' (Hughes, 2000: 21) Although ostensibly their health care buildings differ considerably, which makes summary of their house styles difficult (especially when considered together!), NBBJ's and HKS' designs emphasize what could be termed a 'globalized style', featuring curved glass external walls, internally-lit glass walkways and facades, landscaped gardens embedded within scenic environs, and airy atria receptions and/or open entrances. These elements of the hospital are 'international' at least inasmuch as

they are in evidence in the firms' healthcare designs the world over. This said, vernacular design, borrows local style and materials, is also evident in their architecture (see for example at HKS' Clarian West Medical Center in Indiana, where local stone and a natural lake - views to which are stress-reducing (Ulrich and Zimring, 2004: 27) - dominate (Boekel, 2008)).



Image 1.1 – A digital rendering of the hospital (reproduced with kind permission of NBBJ Architects)

The architects claim the design 'provides a healing, non-institutional environment that enhances the patient, visitor and staff experience. The building layout maximises daylight, views, landscaped external areas and healthcare service delivery efficiency' (NBBJ, nd). While hospital architecture is consciously organised to bring about certain therapeutic outcomes (Gesler, 1992; Curtis et al, 2007: 562), in the context of the PFI Royal Liverpool

part of these outcomes are bound up with the generation of different types of profit. Hospitals have been drawn in to an 'iconic' architectural discourse (Sklair, 2006) that characterises the commissioning and promotion of striking designs by famous architects and firms. Increasingly subject to aesthetic judgements crucial to consecration from within the architectural field, the design of hospitals is celebrated and consecrated, as reflected in healthcare-specific national association prizes in the UK and the USA, and a vibrant publishing sector (for example Boekel, 2008).

In other words, by virtue of their own accumulated status and distinctive building forms, and thanks to their culturally associative qualities, the commission of 'the right' architectural firms can be used to lend credibility to cities (Sklair, 2006). This is certainly the case relative to the new Liverpool Royal. The political discourse around the building's commission emphasises 'hospital-as-investment', and emphasizes the investment (even if, as argued in the previous section such investment is a rather ambivalent form, involving the transfer of resource from public to private sectors). Such mobilization has a highly temporal dimension. The fact that the building being replaced was in 1974 so radically advanced and is now considered unfit for purpose - and, according to The Guardian (2016), widely considered the 'ugliest building in the city' illustrates an aphorism about architecture. Architecture stabilises, but does so rather imperfectly, not least because societies of which the built environment is a part are so dynamic (Gieryn, 2002). Questioning the assumptions that underpin today's designs is a logical step emerging from this starting point. Historical faith in the clinical affordances of architecture is perhaps easier to reveal as reductive - so widely critiqued are notions of hospitals-as-industrial architecture/socio-technical spaces - than are today's assumptions concerning the same. Today's hospitals reflect architectural-medical assumptions in the same way that their antecedents did.



Image 1.2 – The modernist Royal Liverpool (foreground) with the ongoing construction of the new hospital. backgrounded. Image taken by Matt Biagetti (and reproduced with his permission)

The hospital architecture being replaced bears the hallmarks of its provenance: the 1974 Royal Liverpool was designed by Holford Associates, the lead partner of whom was Baron William Holford, who at this hospital as elsewhere was pursuing a modernist agenda for public buildings. Holford advised on the modernist plans for Brasilia and a range of South African cities (Cherry and Leith, 1986). He was also President of RIBA 1960-62, having previously been heavily involved in the authoring of the Town and Country Planning Act (1947), which saw post-war reconstruction adopt a default modernist, 'Brutalist' style (akin to the Royal Liverpool).

Shaped by a range of assumptions about architecture's relation to care, and economic efficiency in an earlier moment, the 1974 modernist hospital was reflective of a model of centralisation of health services that underpinned its development. Conforming to Jonathan Hughes' summary (2000: 21) of the post-war modernist form of tower modernist hospital buildings, Baron Holford's architecture was designed explicitly to reflect symbolic modernity and progressiveness on the practices taking place inside. The prestige afforded the 'advanced' office tower block also shaped the 'industrial' form of this hospital architecture (Cherry and Leith, 1989; Hughes, 2000: 33-5 and 40). Buildings such as the Royal Liverpool could be assembled quickly thanks to the engineering developments associated with ferro-concrete frames and pre-cast concrete facades typical of modernism, which themselves brought culturally-desirable associations with a progressive and technological avant-garde, and lent a forward-looking narrative to major works of public infrastructure (Hughes, 2000; Verderber, 2010; Jones, 2011: 78-93).

The 1974 design should give us pause, encouraging reflection upon what sort of hospital will be fit-for-purpose in 27 years' time, the length of the PFI contract. Contemporary discourses of efficiency - for example the quicker turnaround for ultrasounds at the replacement hospital (as claimed in *The Guardian*, 2016) - seem to share the faith in technology that underpinned the development of earlier, modernist hospitals analysed by Hughes (2000). Historically the bed has been the object around which hospitals are ordered, making floor plans extremely revealing data (Prior, 1988: 94). The Florence Nightingale-endorsed open ward, an orthodoxy of nineteenth century hospitals (Forty, 1980; Prior, 1988: 94; Hughes, 2000), saw collective wards in which space per patient - circa 15000 cubic feet - and bed space - about 100ft square - were specified and indexed relative to other architectural-social spaces, including the house, outside of the hospital. Interestingly in this context there are actually fewer beds in the new hospital than in the

one it is replacing (as reported in *The Guardian*, 2016), revealing of the contemporary primacy placed on private rooms, which take up a greater footprint of space than did the collective wards being replaced.

The architectural form of the Royal Liverpool involves a £335 million build, which estimates suggest will cost three times that figures in repayments over the course of the 27 year PFI contract (*The Guardian* 2012, 2016; *The Architects' Journal*, 2013; *Liverpool Echo*, 2013). Responding to public criticism concerning the opaque nature of the PFI procurement, and its poor value for public money (for example *Nerve*, nd; *Keep Our NHS Public*, 2013; *Liverpool Echo* 2013) in a revealing formation the then Health Secretary Andy Burnham said 'it was not a case of public money or PFI – it was a case of PFI or no hospital' (*Liverpool Echo*, 2013). Similarly, Joe Anderson, currently the democratically-elected Mayor of Liverpool, said of the Royal Liverpool's PFI that 'the time for the debate over the method of funding has passed. We now need to concentrate our efforts on making sure it is delivered' (*Liverpool Echo*, 2013). The assertion that 'There Is No Alternative' other than PFI for the funding of hospitals, or that the time for debating the method of funding or its implications is over, runs counter to democratic debate and scrutiny, especially given the fact that for decades to come the 'method of funding' will constrain healthcare spending in the city in all sorts of unanticipated ways.

PFI contracts also frequently see private developers becoming involved in activity more traditionally associated with the state (Mohan, 2002; Mair and Jones, 2015). This is certainly the case at the Royal Liverpool where there will be 'a "job shop"... to make it easier for local people to find out what opportunities are on offer. Carillion points out it has also agreed to create 100 apprenticeships in areas such as joinery and bricklaying, and has set up a £100,000 fund to help local community groups' (*The Guardian*, 2016).

Similarly, renting out of space to academic research centres and institutions, such as the Liverpool School of Tropical Medicine (The Guardian, 2016), not only helps satisfy the aforementioned value for money criteria, it is also reflective of a secondary aim of the new build, namely to attract young people to life sciences. These initiatives can be understood as politics by other means (Mettler, 2011), in which the private developer takes on responsibility for elements of collective provision that the state used to, drawing down public monies as a result of so doing.

It is against this backdrop that the bundling together of sites and services, potentially including the Liverpool Women's Hospital, whose existence is currently under threat (the decision on such pending), needs to be understood. PFI architecture such as at the Liverpool Royal limits capacities to develop other sites, and for the limits of what is a very long contract. The design of the Royal Liverpool hospital architecture seems to demand analysis of what is not empirically present at the site, precisely because its very existence - and the servicing of the PFI contract (including maintenance and some staffing) - will have significant implications for the existence of healthcare sites and services elsewhere in the city. In spite of criticism concerning the non-transparent nature of the contract and their record of involvement with financially failing hospitals and poor worker relations (Keep Our NHS Public, 2013), Carillion - the builders of the Royal Liverpool scheme, and part of the 'Special Purpose Vehicle' overseeing the delivery of the project - have emphasized that 2000 jobs that will be created on the development (The Guardian, 2012; BBC, 2015). Job creation is a politically-persuasive 'regeneration' discourse in a city such as Liverpool, which is one of the most deprived areas of the UK with high levels of unemployment (The Guardian, 2016). However, contradictions between the time of contracts and shorter-term political cycles - not to mention the tensions between capital cost and repayments - mean

that PFI contracts become manifestations of all manner of controversies associated with time and place.

The commitment from the developers and the NHS trust was that 'out of the 750 jobs created during the construction... 60% must come from the local area' (The Guardian, 2016) is an interesting commitment to place-specific contribution. Notable in this is that numbers of medical staff and nurses are not increasing; it is actually falling clinical staff costs that characterises PFI contracts with reduction of staff costs part of the aforementioned 'value for money' calculation that underpins the very decision to procure infrastructure in this way (Mohan, 2002: 207). Under PFI service reconfiguration is weighted towards 'the effective use of resources' (in fact this was the single most heavily-weighted factor in the Capital Prioritisation Advisory Group, with financial penalties in place for Trusts not rationalising estate costs and staff costs PFI (Mohan, 2002: 204-210)).

Major PFI architecture such at the Royal Liverpool, in part due to its distinctive architectural form, is bound up with making capital via its incorporation into entrepreneurial place-marketing discourse that aligns hospital development with private sector investment (see Liverpool Echo, 2013; The Guardian, 2016). Positioning delivery of healthcare and statutory public infrastructure in this way represents a misreading of the mechanics of the PFI procurement vehicle, and represents an intensification of hospitals' previous role relative to discourses of civic pride (Kearns and Barnett, 1999; Adams and Stilich, 2006). Claims of a new 'public realm', and a hospital that 'will "heal" a once impermeable site in the city's centre, providing new connections to adjacent neighbourhoods, Everton Park, and knowledge Quarter (NBBJ, nd) are contestable and bombastic, and reveal a set of ideas about what major PFI architectural projects can do.

CONCLUSION

Adrian Forty suggests that '[a]lmost no other type of building has produced more varied and opinionated ideas about its proper form than the hospital' (1980: 62). Hospital architecture certainly takes many and varied forms, and architectural variation is so controversial precisely because it implies an approach to health and illness and the bodies within (Prior, 1988: 87). My argument here has not concerned the 'proper form' of hospital architecture so much as the necessity to go far beyond the designed parameters of architecture to satisfactorily situate buildings in their political-economic 'place'. Hospital architecture is the outcome of a contingent set of political-economic relationships, which go far beyond the walls of the building (Mooney and Reinartz, 2009).

Decisions concerning how to procure hospitals are bound up with all sorts of political claims, as distinct from 'evidence' (Gieryn, 2002; Imrie, 2012) concerning the relationship between architecture and health and illness (having read Day (1990), Cama (2009), Ulrich and Zimring (2009) - all of whom call for 'evidence-based design' - I am none-the-wiser as to what would constitute 'objective evidence' in a context such as a PFI commission. If buildings are 'interpretable objects' (Yaneva, 2012: 2), PFI hospitals are a paradox, an expression of knowledge about some things, and a complete 'submerging' (Mettler, 2011) of others; this hybrid public-private architecture is never a singular object, but a reflection of lots decisions taken, forms made, assumptions materialised, and some not. So, hospital architecture is a reflection of a rather speculative set of procurement arrangements that need to be made sociological sense of, both in terms of public-private redrawing, as well as study of the human-object interactions that will take place within.

Accordingly, it is crucial that research includes engagement with phenomena not immediately evident to the senses. While across the piece the studies discussed here report on a panoply of users and uses and avoid the 'ontologically-flat' approach based on

description of a universal reality of that which is empirically evident, analysis of the more broadly contextual nature that surrounds the politics of hospitals is key. Buildings are 'interpretable objects' (Yaneva, 2012: 2); resultantly architecture is never a singular object, but a reflections of lots decisions taken, forms made, assumptions materialised (and those not).

The PFI hospital is from this perspective a hybrid, a reflection of a rather speculative set of procurement arrangements that need to be made sociological sense of, both in terms of public-private redrawing, as well as study of the human-object interactions that will take place within. Accordingly it is crucial that research includes engagement with phenomena not immediately evident to the senses.

The procurement processes with PFI hospitals works to effectively 'submerge' political decisions and priorities, obscuring their very status as political (Mettler, 2011; Mair and Jones, 2015). Despite reflecting taken-for-granted relative to the scope of what could-be-possible, PFI hospital architecture - despite its material visibility - are brought about by opaque sets of reworkings of state-market-society (Mair and Jones, 2015). The logics of hospital funding are incredibly difficult to gain transparency about; the politicians' response that 'there is no alternative' is to misunderstand the contingent – but 'real' - entanglements between hospital architecture and political-economy. Hospitals could always be different: they were in the past, are elsewhere, and will be again in the future. All hospitals, including PFI hospitals, are the outcome of a range of political decisions, built 'solutions' to problems the origin of such that need to be borne in mind when analysing the results.

Examination of the political conditions of hospital architecture's production may lead us to a different set of questions than does close study of the interactions between humans and

objects. On one hand, as medical technologies, hospitals are 'active' in the process of care, responsible for shaping practice to some - empirically open - extent. But on the other, hospitals are themselves shaped fundamentally by extrinsic forces, which are not always empirically evident at the site. It is for these reasons that I would echo Thomas Gieryn's advice to sociologists to 'take architecture more seriously, but perhaps not too seriously' (2002: 35).

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