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INVITED ARTICLE

Challenging complacency in construction management research: the case of PPPs

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ABSTRACT

Public-Private Partnerships (PPPs) are joint ventures in which the private sector works in partnership with government bodies to deliver public sector projects with the intention to deliver them more quickly, efficiently and with better value for money. They are also one of the most contentious project delivery mechanisms to have been mobilised in recent decades. Research has demonstrated the lack of realised value within many such projects, yet construction management academics continue to examine ways of increasing, implementing and optimising this approach in practice, even encouraging its adoption worldwide despite growing social and political dissatisfaction. Here, we go beyond what we see as myopic construction management perspectives, placing our body of work firmly within wider economic, political and social contexts. We challenge uncritical academic compliance with a process that demonstrably contributes to economic inequalities, opportunism and exploitation. We confront the lack of criticality in construction management research of PPPs, and call for construction management academics to broaden their research focus and engage in more robust critique and analysis of construction systems, as they are realised in practice.

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Carillion, R.I.P

The financial collapse of Carillion on the 15th January 2018 heralded the end of over 100 years of history for one of the UK's oldest construction firms (Rogers 2018a). Spun out from Tarmac Construction in 1999, Carillion became heavily involved in the UK PFI marketplace, and was working on 420 public sector projects at the time of its collapse, despite only having £29m in the bank on a turnover of £5bn (Rogers 2018b). Indeed, Carillion had not been in the best of health for a while. Short selling of shares began after the notification it was extending its supply chain payment terms to an extensive 120 days in 2013, and eventually culminated in a £845m profit warning issued in the July of 2017. Yet in the 7 days following that profit warning, Carillion was still awarded two government contracts for the HS2 project, which were in turn used to provide evidence of its sustainable future with suppliers and subcontractors (Rogers 2018b). But this future did not last long. Six months later, in early 2018, Carillion requested a £223m bailout from the government and further funding for specific projects, but this still couldn't stop the company going into liquidation on the 15 of January (Rogers 2018b).

The consequences for the UK construction industry were seismic. Sites were shut, payments stopped, and monies owed on retention or held within 120-day payment terms became ensnared in the receiver's (those given responsibility for Carillion's assets following the collapse) coffers, not to mention the shock that a company so well-established could also be so vulnerable. An estimated 30,000 subcontractors and suppliers that made up Carillion's extensive supply chains were owed around £2bn at the time of the collapse (Mor *et al.* 2018), and suddenly faced financial crises and collapses of their own (BBC 2018a), several of which have sadly been realised over the course of 2018, and still continue to make the news (Marshall 2019). Carillion's ongoing projects also caused problems for many self-employed construction workers, unable to retrieve their tools, equipment and materials (and therefore their livelihoods) from locked-down Carillion sites under threats of trespass from the receivers (BBC 2018b). The collapse has more recently seen impacts for investors and insurers in the private

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sector, who are estimated to have lost around £603m as the cost of completion of Carillion's two ongoing hospital projects has now topped £2bn, an increase of 43%, due to incomplete works as well as non-compliant and poor quality in the build already constructed (Marshall 2020).

Despite the hyperbole, Carillion was not "too big to fail." Despite the fact that almost half of its workload was reliant on public sector projects (Rogers 2018b) with the UK government as their client, it still failed. Despite the fact the procurement mechanisms under which it was working were meant to be grounded in robust economic analyses and contractual foundations, and mobilised "revolutionary" PPP methods of procurement, it still failed. Yet failure can and should be seen as an opportunity for learning, and there are clearly lessons to be learnt about construction procurement, economics, and as illustrated by this specific case, about PPPs.

Introduction

We suggest that the construction management research (CMR) community also has much to learn from the fall of Carillion. In this paper we seek to highlight what we feel is an element of complacency in CMR, using PPPs as a "case study example." We do not seek to present a detailed autopsy of Carillion, nor undertake an extensive review of the detailed mechanisms that form PPPs, PFI or Private Finance 2 (PF2), or any type of public-private partnership, and their benefits and challenges. There is actually no need, as such work has been done well by others elsewhere. Instead, we wish to use this event as an opportunity to reflect on our current position as CMR academics, to consider how our research activities are currently shaped and directed by various ideologies and other imperatives, and what consequences this has for CMR as a body of work able to make a positive contribution to society as a whole.

Using PPPs as a case study enables us to unpack what we see as something of an "economic myopia" within the majority of CMR in this specific research area, and go so far as to challenge such approaches as complicit (mindfully or not) with an ongoing exploitation and opportunism found in the wider global economic marketplace. This argument finds support in the recent work of Narbaev *et al.* (2020), and their multi-disciplinary meta-review of PPP research which found clearly identifiable differences in perspective between CMR work around PPPs and that undertaken in different fields. For example, whilst the perspectives of academics in Economic Development and Public Administration and Management incorporate wider economic and social concerns in their research, CMR keeps its focus firmly fixed at the micro-level of the project, and its motivations closely aligned to the private-sector and the financial benefits of PPPs for contractors (Narbaev *et al.* 2020, p. 118). Here, we suggest that without grounding CMR within such wider economic and social contexts, acknowledging the underpinning contemporary financial practices and their consequences, we are as a community lacking a holistic perspective of PPPs, and thus lack due consideration of their impacts on society as a whole.

We fully accept the subjective nature of this work, and indeed do not intend it to be objective or balanced, instead we wish to challenge to CMR academics to more robustly consider wider contexts in their work. To achieve this aim, we first provide a very brief overview of PPPs, specifically their use within the UK context, and then unpack in more detail some of the key underlying assumptions and ideologies that bolster and support this procurement mechanism in practice. We then explore why CMR does not engage with broader and more critical approaches in its evaluations and examinations of PPPs. This also enables us to examine how current CMR research shapes and perpetuates a distinct research agenda with regard to PPPs, and the potential consequences of this with regards to the CMR contribution to the development of "PPP theory," as it in turn shapes social reality, policy and practice (Marti and Scherer 2016). Finally, we make suggestions for change in the CMR PPP research agenda, and indeed within CMR as a whole, seeking more holistic perspectives of political, economic and social justice within our work, able to enhance our contribution overall.

PPPs in practice

A very brief history of PPP in the UK

PPPs were first officially announced in Norman Lamont's Autumn Statement of 1992 in the form of the Private Finance Initiative (PFI), presented as a way of "increasing the scope for private financing of capital projects" (Allen 2001, p. 14). A number of factors lent support to this proposal: an increasing dissatisfaction with the provision of services by the public sector, with associated challenges of lobbying, corruption and poor value for money (Engel *et al.* 2014); the growing influence of the UK's wider economic policy of the "roll-back" of the state under neoliberalism (Fougère *et al.* 2017), and a consequential increase in the contracting-out of public services to the private sector (Yescombe 2007); and, perhaps most serendipitously, the practical way it offered to circumnavigate the strict financial constraints in place on the government at the time, as private finance could provide public services on their behalf (Engel *et al.* 2014).

The guiding principles of PFI were twofold; there was to be a genuine transfer of risk from the public to the private sector, and the projects should provide value for money (VfM) for the public. The PFI model would also enable the public sector to access resources and other private sector capabilities in the provision of their services, such as innovation and quality enhancement (Villani *et al*. 2017), as well as draw on other efficiency gains from private finance and market discipline, supported by the introduction of competition to improve service quality overall (Engel *et al.* 2014).

The scheme proposed by Lamont was intended to replace the Ryrie Rules that had been in place since 1981. Prior to this PFI initiative, the British government had been reluctant to allow private capital to finance public sector projects, and the Ryrie Rules were intended to monitor governmental involvement with private finance, mindful of the impact that close relationships with private contractors could have on the market. Notably, that "government guarantees or commitments … should not result in schemes offering investors a degree of security significantly greater than that available on private sector projects" (Allen 2001, p. 13). Such concerns are based on the economic notion of "Moral Hazard" (Lane and Philips 2002), in this instance the hazard being the distortion of the market that can occur whenever large players (in this case the government) become involved in the economy. Amongst other things, it was feared that such governmental involvement could distort the workings of the market, and lead to government backed private monopolies (such as Carillion) that would become "too big to fail."

Yet despite such reservations, the PFI procurement model of PPP, in a number of forms which include build-finance-maintain, design-build-operate, design-build-finance-maintain and design-build-finance-operate among others (Ke *et al*. 2009) and through the mechanism of either government or user-pay (Engel *et al*. 2014), was adopted with enthusiasm in the UK. The scale of work undertaken through this mechanism has been considerable: as of the 31 March 2018, there were 704 current PFI and PF2 (it's subsequent iteration from 2012 onwards) projects in the UK, 700 of which were in operation and four under construction, with a total portfolio capital value of £57 billion (HM Treasury 2019). However, there has been a decline in PPP activity in the UK since the peak of 2004, which saw 70 new projects reach financial close with a shared value of £70bn (HM Treasury 2019). Indeed, in 2018 the UK government announced a policy shift away from PFI and PF2 projects towards different forms of PPP, such as the Regulated Asset Base Model and the UK Guarantees Scheme (HM Treasury 2018a), which differ in structure from traditional PPPs such as PFI, and so bring with them different challenges. Yet for the purposes of this paper, this change in policy is perhaps not all that relevant as, for example, the UK Guarantees Scheme (UKGS) offers government-backed guarantees to help infrastructure projects access debt finance when they have been unable to raise it from the financial markets (Infrastructure and Projects Authority 2017), making the concerns of moral hazard levelled at PFI still very much valid for this alternative procurement route.

PPP problems

This 2018 move by the UK Government away from the PFI and PF2 forms of PPP can be seen as a direct response to the significant criticism they received from both academics and those across the political spectrum. We do not seek to revisit those arguments in detail here given the work that has gone before, and given recent policy changes this would also be equivalent to shooting a dead fish in a barrel. What we find much more interesting are the consequences of such criticisms, which have been longstanding, on CMR itself and its body of work, and how CMR has acknowledged the wider role of the market in the operations of PPPs more generally. This is explored later, and here we briefly highlight the most prominent problems with PPPs as noted within the literature.

Their "well known shortcomings" (Engel *et al*. 2014, 18) have been recognised both on the political left and right. For the left, issues of excessive borrowing costs, long-term debt burdens, excessive private sector profits, poor risk allocation and the lack of accountability and democratic oversight of the projects have surfaced as key causes for concern (Benjamin and Jones 2017, p. 2–3). Whilst the right-wing Centre for Policy Studies stated: "Of course, there is no way to defend many of the PFI deals signed since the 1990s, which have been some of the costliest experiments in public policy-making and infrastructure investment … the procurement process was flawed … there was an asymmetry of negotiating power between individual hospitals, schools or councils … and contractors … PFI is an ugly mess" (Mahoney 2018, p. 16). And such criticism from either side is not merely idle conjecture. The annual cost of current UK PFI/PF2 deals in debt repayments was £10.3bn in 2016–2017, and if no further PPP deals are entered into, future charges are estimated to be (at least) £199bn until 2040 (HM Treasury 2018b).

Nor has CMR been uncritical of PFI and PPPs. As Henjewele *et al*. (2011, p. 826) note, early concerns were based "… on ideological grounds pertaining to the privatisation of public services," but then focused on particular aspects of PPP as projects were realised. Empirical evidence began to show that, contrary to notions that championed the "efficiency" of the private sector, systems that included private sector actors did not perform better overall and, in fact, frequently required more resources making them less cost-efficient (Marx, 2019). PPP projects are prone to time (Ahadzi and Bowles 2004) and cost overruns, as estimates soar (Henjewele 2011), and also tend to suffer from high tendering (Ke *et al*. 2009) and contracting costs (Engel *et al*. 2014). Specific issues have been raised around the subjectivity in appraising options and quantifying risks (Carrillo *et al*. (2008), particularly given the loss of construction project evaluation, development and management skills from the public sector tasked with doing so, and although risk transfer to the private sector is generally increased under PPPs there is not necessarily any corresponding reduction for the client (Gruneberg *et al*. 2007). VfM, one of the core tenets of PPPs has also been criticised, as such assessments cannot be constant as project requirements change continuously, a "VFM optimism" exists that inevitably assumes higher gains for lower outlay, and there is a considerable disjoint between pre-contract and post-contract VFM assessments, with little evaluation undertaken during the operational phase (Henjewele *et al*. 2011, 838). Henjewele *et al*. (2013) also argue that the role of the "public" within the PPP process is very much lacking, and should be increased to enhance VfM overall.

Hopes that private sector expertise would support industry innovation have also been challenged (Leiringer 2006) and indeed remain unrealised as much more fundamental issues of poor quality on PPP projects abound: investigations following the collapse of 9 tonnes of the external brickwork skin of Oxgangs primary school in Edinburgh during a storm revealed serious quality issues at over 88 Scottish schools constructed under PPP contracts (BBC 2017). Such issues lead Engel *et al*. (2014) to stress that public provision should actually be favoured over PPPs when quality is non-contractible.

Ivory and Miozzo (1998) demonstrated how early PFI projects prompted contractors, with greater control of the design of the project, to overstate costs and over-specify their buildings, in order to protect their own long-term investments, and the profit-seeking behaviour of private actors (Marx 2019) remains a perhaps unsurprising problem in both contract negotiation and performance. Indeed, the opportunistic renegotiations of contracts is a key concern which "… overturns many of the potential advantages of PPP" (Engel *et al*. 2014, p. 19) creating a bilateral monopoly in which it is difficult to punish a firm for non-compliance. Such renegotiation and opportunism is prevalent in the PPP marketplace, triggered by below than expected project revenue due to inaccuracies in forecast data as noted above, which can be due to innocent error or potentially more devious manipulation.

Perhaps the kindest evaluations of PPPs suggest that the evidence of how well they perform remains "inconclusive" (Engel *et al*. 2014) or "unclear" (Narbaev *et al*. 2020, p. 109). The fiercest is that the PPP model is "… very expensive, exploitative, increases inequalities and deskills the public sector. Claims about achieving 'value for money', 'social value' and 'commissioning for outcomes' are meaningless" (Whitfield 2016, p. 7). However, despite the broad spectrum of such perspectives, and the specific and focused criticisms found within the bodies of work as noted above, there remains within CMR a lack of recourse to such wider issues and the economic mechanisms of influence that lie underneath. We now outline some of these in turn, before reflecting on how they have in limited and constrained thinking, both political and academic, and thus consider the consequences for CMR through our diagnosis of "economic myopia."

Money, markets and moral hazard

The role of the market, and indeed the influence of the global economy on PPPs, cannot be underestimated. The interconnectedness of the global financial markets, and more specifically their deregulation, has had considerable influence on how PPPs can and indeed do operate. It is policy-makers who determine the development of PPP projects (Robinson *et al*. 2010), and therefore wider policy, specifically economic, should perhaps be a more important factor in CMR. Here, we raise a number of what we feel are key issues in this area around money, markets and moral hazard. While such observations may not be radical in and of themselves, and indeed we hope they are actually familiar to many, they do however often go unacknowledged in CMR despite their relevance to the wider contexts of PPPs, and how they inform and influence PPP practices.

Money, or rather debt

The PPP model has a necessary reliance on debt-fuelled borrowing as a means to finance and maintain projects: 90% of the money used to finance PPP projects is borrowed, the remaining 10% being "equity" brought to the project by the contractor (HM Treasury 2018b), inevitably tying PPPs into the world of finance capital. As the Bank of England note: "… in the modern economy, commercial banks are the creators of deposit money… the act of lending itself 'creates' deposits. Commercial banks in effect create money, in the form of bank deposits, by making new loans – what has been referred to as 'fountain pen money'" (McLeary *et al*. 2014. p. 15–16).

For some observers, this is simply a well-known and accepted mechanism of commercial banking, however what should perhaps be better acknowledged is that this is a relatively recent change in financial practice. The implications of the deregulation of banking through such acts as the Financial Services Modernisation Act (1999), which repealed the Glass-Stegal Act of 1933, put in place to better regulate banks after their practices contributed to the 1929 global economic crash have seen significant consequences. The ability for banks to create new asset types (in particular packaged mortgage-loans which proved worthless), in combination with huge levels of private dept (facilitated by the ease of borrowing and lending, irrespective of actual bank liquidity), led directly to the 2008 financial crash. The subsequent bail-out of the global financial system in 2008 involved quantitative easing and governments trading toxic assets for government-backed securities that could safely be relied on by banks to continue their (highly profitable) lending operations, as described by the Bank of England above.

This bailout saw the British National Debt increase from £557.2bn (35.4% GDP) in 2007–2008 to over £1tn (64.6% GDP) in 2009–2010, as the British government (on behalf of British taxpayers) agreed to shoulder this toxic debt on behalf of the banks. The increase in government expenditure subsequently ushered in the policies of "Austerity," to enable the government to balance its books, and service the increased interest payments on this debt. An aspect of this situation that often goes uncommented upon is the fact that much of this debt is owed to the very same financial institutions that were the recipients of such governmental largess, in the form of the bailouts, in the first place.

PPPs are fundamentally tied into such finance debt, enabling governments to "discount the future" (Engel *et al*. 2014, p. 20) using long-term obligations to improve today's financial position at the cost of tomorrows long term debt. As the PPP model relies fundamentally on private sector finance, or rather debt, instead of public sector borrowing to fund its projects, it has been criticised for excessive costs due to the higher interest rates this arrangement inevitably incurs (Benjamin and Jones 2017). Yet interest rates have also seen unprecedented activity since deregulation and have further enabled significant increases in corporate debt, as held by Carillion at the time of its collapse. UK corporate debt currently stands at £390,700,000,000 with £122,600,000,000 added since 2015 (Booth 2018). As a result of the financial crisis of 2008, UK interest rates have been held at 0.5% since March 2009, creating a situation that makes the levels of corporate debt accumulation much easier to finance. However, should interest rates rise (between 2000 and 2009 interest rates averaged around 4%) the levels of debt held by many corporations will rapidly become problematic, as interest would consume a considerable portion of profit, and the debt itself rapidly become unserviceable.

In addition to this, large corporate organisations do not need to rely solely on such traditional forms of borrowing, as they are able to issue their own debt in the form tradeable corporate bonds. This process that has been further encouraged (fundamentally contradicting any notion of a free market) by the Bank of England's launch in August 2016 of its Corporate Bond Purchasing Scheme (CBPS). This scheme is intended to "impart monetary stimulus by lowering the yields on corporate bonds, thereby reducing the cost of borrowing for companies… and… stimulating new issuance of corporate bonds." An undertaking that inevitably results in the creation of even more debt. Via the CBPS, the Bank of England is looking to purchase a portfolio of up to £10 billion of sterling corporate bonds, representative of issuance by firms making a material contribution to the UK economy, in order to impart broad economic stimulus (London Stock Exchange 2018).

This solution to the problem of corporate debt, with bond yields being too expensive for companies to finance, is for the Bank of England (backed by UK taxpayers) to make it easier for them to borrow more money, primarily so that they can continue to pay dividends to shareholders whilst servicing their existing, unprecedentedly large debts. Actions such as these, that form in effect a kind of "corporate socialism," have seen worldwide corporate debt increase more than 50% since 2007 to over $68tn; a figure that is put in clearer perspective when it is considered that total world GDP was just under $80tn in 2017 (Statista 2018).

Markets

A further fundamental question around PPPs is their role and operation within the so called "free market." Our Western ideological conceptualisation of the free market was articulated in the then UK Prime Minister, Theresa May's, speech to the Bank of England of May 2017, in which she stated: "In essence … [the free market] … is very simple. It consists of an open market place, in which everyone is free to participate, regulated under the rule of law, with personal freedoms, equality and human rights democratically guaranteed … an accountable government, progressively taxing the economic activity which the market generates, to fund high-quality public services which are freely available to all citizens … We should never forget that raising the living standards and protecting the jobs of ordinary working people is the central aim of all economic policy … Not serving an abstract doctrine or an ideological concept – but serving the real interests of the British people" (May 2017).

May's the image of the "simple" workings of the free market, although providing a powerful ideological underpinning to the actions and decisions of politicians, in fact has little connection to the reality of the current deregulated global financial system. Absent from May's description above is the fact that global wealth has become ever more concentrated into fewer and fewer trans-national monopolistic mega-corporations, fewer than 10% of public companies account for more than 80% of profits (World Economic Forum 2017). These corporations, through corporate mergers and takeovers, vast economies of scale and legal protectionism should make it farcical to posit the notion that a sole trader, an SME and Carillion are all "simply competing" in the global free market together.

May's (2017) notion that "an accountable government, [is] progressively taxing the economic activity" also reveals how little reality actually matters when weighed against deeply held ideological convictions, as demonstrated by the levels of tax avoidance endemic in many PPP financial arrangements (Benjamin and Jones 2017). Offshore funds now hold between 50 and 100% of the equity in 45.4% of UK PFI projects, and the largest five of these funds, despite making a profit of £1.8bn in 2011–2015, paid zero tax at all (Whitfield 2016). A particular irony is that the secondary market funds that currently own the £877m HM Treasury Office PFI project are themselves located in the tax havens of Jersey and Guernsey (Whitfield 2016).

The commercial confidentiality that surrounds PPP projects has led to obfuscatory practices that "… have opened the door to highly profitable re-financing deals" (Benjamin and Jones 2017) and seen the development of a secondary equity market in PPP (De Biasio and Murray 2017). This market saw the sale of PPP equity reach a value of £17.1bn by mid-2016, a 42.5% increase in less than 4 years, with ownership becoming concentrated in a smaller number of offshore funds (Whitfield 2016, p. 6–7). This market has little to do with meeting the needs of the public, raising living standards or protecting jobs, and much more to do with (un-taxed) profit as outlined above, and as PPPs remain unlisted equities, the precise practices applied in their transaction also remain somewhat opaque (De Biasio and Murray 2017).

Moral hazard

The notion of Moral Hazard is also critical to free market performance, and of vital importance within the PPP model, as the government's role as both project client and policy maker has potentially serious repercussions for the markets in which they operate. Moral Hazard in this instance even goes so far as to distort the very market PPPs are attempting to harness. For example, the PPP model inevitably supports the creation of vast monopolistic corporate entities, such as Carillion, that would never exist in any genuinely free market economic system, whilst the use of financial support, subsidies, minimum revenue guarantees by the government that are often needed to make PPPs viable (Engel *et al*. 2014) fundamentally distorts any notion of free market economics in such instances.

The moral hazard of the government with regards to the now normal economic practices around finance capital is also significant. The knowledge that a company has the backing of large government contracts makes them highly attractive prospects, as they are less likely to default on their debts due to this government backing, as for the most part governments are themselves diligent debtors. This in turn means that a company engaged in PPPs in question can borrow more money on the back of its existing contracts, in the process getting into more and more debt: the proportion of debt to finance on UK PPPs is 90%, compared to 60–80% on non-PPP projects (De Biasio and Murray 2017). The perils of such debt-fuelled growth can clearly be seen in the collapse of Carillion, which increased its loans from £242m in 2009 to £1.3bn in 2018 (Mor *et al*. 2018), and was actively seeking more finance, even requesting £10m support on a week-by-week basis (Marshall 2018) right up to its eventual failure.

There is no alternative

Many PPP projects are essential for society, such as infrastructure and transportation projects, and as Henjewele *et al*. (2011, p. 826) found, there exists the "potential for development teams to be biased in favour of PFI during VfM assessment since they often do not have any alternative – it is either PFI or no funding," at least under current economic policy. This is a phrase not unfamiliar to recent economic history either, forming as it does the core of Conservative Party economic policy since the time of Margaret Thatcher (prime minister from 1975 to 1990): There Is No Alternative (TINA). Under this premise, roll-back neoliberalism (Fougère *et al*. 2017) is presented as the only alternative, with other economic options not only dismissed as "unrealistic" (Drechsler 2018) but in many cases cannot even be conceived. Successive governments in the UK, both on the left and the right, have followed this doctrine and have also, to some extent, found themselves trapped by the debt it has created.

This was clearly revealed by George Osborne's actions when he became Chancellor in 2010, promising a more "pragmatic" view of the situation. Prior to this, he had been highly critical of PFI (Helm and Inman 2009) yet was then faced by the reality that to implement his desires for "transparent accounting … [and] … remov[ing] the perverse incentives that result in PFI simply being used" (Helm and Inman 2009) would also mean revealing the hidden government debt that was created off-balance sheet through PFI. Osborne feared that any such fiscal candour would see Britain's credit rating downgraded (HM Treasury 2018b, p. 36), and thus his replacement for the "discredited" PFI of the New Labour government that preceded his tenure, PF2, was essentially a "re-brand" of PFI where the "fundamentals of the financing structure and contracts remain essentially the same" (HM Treasury 2018b, p. 5). Osborne, despite the prior failings of this model, initiated in 2012 yet another attempt to successfully harness private initiative, via an "alternative" PPP scheme. This new scheme, that handled investments totalling over £13bn between 2012 and 2017, was, contrary to Osborne's initial rhetoric, even less transparent than PFI or PF2, as the British Treasury themselves state: "HM Treasury used to collate and publish information on these deals but has not done so since 2010. Also, unlike new PF2 deals the expected and actual equity investor returns are not disclosed" (HM Treasury 2018b, p. 46).

Osborne's approach to this issue neatly highlights the imaginative impasse we have reached economically, politically, and we will argue also academically. When faced with, and even explicitly acknowledging, the failings of PPP Osborne still concluded that it was not the *concept* that was at fault but merely its *implementation*: PPP just needed to be "done better." Indeed, this technocratic reasoning is precisely what the private sector relies upon. Despite the anti-state rhetoric of neoliberalism, it still requires the government to develop markets in ways that enable the use of the lucrative PPP mechanism for its procurement (Fougère *et al*. 2017).

Such rationalisation can also be found with regards to the economic marketplace as a whole. The sense that, despite the problems faced within neo-liberal economies, clear headed rationalism, as exemplified by Osbourne and later by the then Prime Minister Theresa May, mean the only cure for the country's economic ills is more of the same, only "done better," and any problems are only temporary inconveniences that can be resolved by the same "free market" forces that caused them. Ralston Saul (1992, p. 401) sums up nicely the entrapment of thinkers and policy makers within the neo-liberal frame thus: "this need to describe reality other than as it is … is merely a facet of the rational conviction that man can and will change circumstances to suit his own plan. The more abstract our economies, the easier it is to believe that imaginary financial situations can be endlessly manipulated. There is, however, nothing in history to prove that this is so." What we are arguably witnessing is an ideological crisis of imagination regarding the way the economy does (and should) work in politics, academia (including CMR) and the media. The discourse around free markets and growth has become so entrenched that for many it is not even possible to imagine anything different, there simply is no alternative.

Summary

As has been outlined above, many of the problems surrounding PPPs emerge from the unquestioning and uncritical adoption of a very narrow view of economics. The firm conviction that the public sector is wasteful and inefficient and that the private sector is efficient and resourceful, has led to an intellectual stagnation in economic policy making. Far from leading to a mutually beneficial "partnership" between the public sector and private finance, PPP has instead led to monopolistic corporate behemoths, huge levels of corporate debt and a transfer of wealth in the form of debt obligations for taxpayer backed projects, from the public to shareholders and financial corporations. The private sector has grown in power and wealth, resulting in what Mintzberg (2016) labels an "unbalanced society" in which the three sectors (public, private and plural) are no longer in balance, and are not even complimentary.

Construction management research and PPP

Having explored some of the key underlying issues and influences we feel are all too often left unremarked in CMR considerations of PPP, we suggest that, alongside the UK government, it too suffers from the belief that there is no alternative. CMR has had a long relationship with PPP, yet our economic myopia renders CMR complicit, either consciously or unconsciously, through our research into this procurement approach resulting in the ability to simply overlook the weight of evidence of the negative consequences of PPPs as realised in practice. CMR ignores, for example, the fact that this procurement method is not operating within true free-market constraints, and indeed is supporting unsustainable debt-fuelled growth across the world. It also readily complies with the technocratic belief that the evident failures of PPPs are not due to its underpinning philosophy, but to practical errors regarding its implementation: it will work, but if only we do it "better."

Yet a technocratic approach to the research of PPPs is perhaps unsurprising. As a vocational field, CMR has close links with industry, and therefore the problems and desires of industry (the private sector) become our own, and notions of "progress," "production" and "growth" as tied to a market-centric society dominate (Sherratt 2017). These underlying assumptions are readily able to support, validate and perpetuate technocratic approaches to the research of PPPs, Li *et al*'s highly cited 2005 paper in *Construction Management and Economics* "Critical success factors for PPP/PF projects in the UK construction industry" providing some "most-read" evidence of this. As although Li *et al*. (2005) do make considerations of "accessible financial markets" as necessary incentives for private sector participation in PPPs, they do not critically consider the wider economic marketplace and its influence on construction itself. Instead we remain happy to explore "…what makes for a successful partnership and [how to] bring this result about" (Grimsey and Lewis 2004, p. 2) within the existing constraints of PPP. As researchers, we aim to improve and enhance PPP in practice, whilst remaining blind to its myriad of problems, and the fundamental weaknesses within in this model of construction financing. We do not seek to challenge or bring fundamental change. Instead, we are more likely to research topics such as a "better understanding of the dynamics of long term stakeholder relationship in infrastructure investment [which can] thus serve to deliver a platform for greater investment." (McClements *et al*. 2017). As Li *et al*. (2005, p. 464) note "the state of the market" and its "trends" are certainly accepted as influential factors for the PPP process, but without any critical consideration of the fundamental nature of the market or its implications for construction.

This, in our view, myopic CMR perspective results in un-critical compliance with neo-liberal economic ideology, and is clearly evidenced in the complete body of work produced by CMR academics, as illustrated in the recent meta-analysis of PPP research recently undertaken by Narbaev *et al*. (2020, p. 109). Their work identified 4 main research domains of PPP: (1) partnership research, (2) public welfare research, (3) worldwide diffusion research and (4) project research (Narbaev *et al*. 2020, p. 116). CMR is mainly active within the first of these domains, with research including that of stakeholder relationships, contracts and governance, and the fourth, with research incorporating project performance, critical success factors and risk allocation. In both domains, CMR emphasises the private sector within its work, frequently taking micro-level project perspectives as the unit of analysis (Narbaev *et al*. 2020, p. 110). We share both domains with other fields of academia, although Narbaev *et al*. (2020) found very little overlap in research outputs. The work of Public Administration and Management researchers also falls within the (1) partnership research domain, yet their focus is at the policy rather than project level, and they "… pay more attention to social issues, societal benefits, governance and legitimacy of the PP concept," in contrast to CMR which mainly mobilises partnership research to investigate the financial benefits for contractors (Narbaev *et al*. 2020, p. 118). Our other shared domain is that of (4) project research, and this is shared with Transport Researchers, who also take a private sector perspective in their work around the provision of infrastructure worldwide. However, CMR remains silent on the issues of (2) public welfare research, which looks at "…the benefits for society rather than profit for project partners" (Narbaev *et al*. 2020, p. 118) and (3) worldwide diffusion research, undertaken mainly by Economic Development academics who "…see PPP as a solution to wider social and economic problems, such as sustainable economic growth or unemployment in a region or particular jurisdiction" (Narbaev *et al*. 2020, p. 119).

Narbaev *et al*'s (2020) analysis reveals the two distinct niches CMR has carved for itself in the field of PPP research, aligned to the interests of the private sector and most concerned with project details at the micro-level, both of which have established and perhaps perpetuated our myopia. Other meta-analyses confirm our claim. For example in their work, Tang *et al*. (2010) found that CMR has looked to improve the operations of PPPs in practice, notably through research in three key areas: risks, relationships and financing. Where economic and financial aspects are noted, they are frequently limited to their consequences for the actors involved, rather than any consideration of the impact of PPPs on the broader economic marketplace or wider social context. For example, the notion of economic viability and the concept of "favourable investment" are prominent, despite the fact that many of these investments represent little more than increasing levels of debt within the project partners. Researches of financing explores value and return on investments, but also the development of financial engineering techniques to provide "win-win results for both public and private sectors" (Tang *et al*. 2010, p. 689). Yet despite their considerations of future financing research duly noting that "when the government provides too much guarantee, it would be easy for the concessionaire to get the benefit from the contract at the expense of the public" (Tang *et al*. 2010, p. 690), Tang *et al*. still conclude to the point that research should aim to support "more effective ways … to manage the relationship between the public sector and the private sector" (Tang *et al*. 2010, p. 691). Despite copious evidence detailing the shortcomings of the PPP model, they appear unable to reflect on the possibility that the problems surrounding PPPs are not due to a lack of effectiveness, but are instead due to the (mistaken) premise that this relationship could ever be mutually beneficial, an assumption they instead take as their starting point. Similar ideologies are found in the work of Cui *et al*. (2018), which also unquestionably positioned PPPs as beneficial, able to increase the economic value of infrastructure outputs and facilitating development. Although the "appropriateness" of PPP is noted, this is considered on a project by project basis, given project-specific internal and external factors of influence, rather than a critical consideration of whether PPP is an appropriate procurement mechanism in and of itself, given the wider repercussions from its adoption. Indeed, Cui *et al*. (2018) conclude with the need for future research to "work on the next generation of PPP studies to support the development of infrastructure" (Cui *et al*. 2018, p. 773). Seemingly there is simply "no alternative" when we need to build things like roads and railways.

But of course there is. There are in fact many ways to do economics, none of which are value-free nor scientific, as "behind [the] technical concepts and dry numbers lie all sorts of [unconscious] value judgements" (Joon-Chang 2014, p. 111). It is a mistake (arguably the most fundamental mistake of our time) to assume that economics as it is practiced today is following long-held traditions based on science and not on arbitrary and dogmatic views of how certain people, including those profiting from these beliefs, assume the world should work. It was such mistaken confidences in the workings of the financial system that led to the financial crash of 2008 and has allowed the same system to continue in its wake. In an ultimate irony, such thinking also allows criticism of this "science" to be dismissed as "ideologically driven," and can therefore safely be disregarded as unrealistic.

The role of academics in CMR: challenging complacency

As Noam Chomsky (1967) argued, the role of academics should be to question assumptions, to be more thoughtful and to be much more critical, and to look beyond such unspoken beliefs and ensure they are challenged where appropriate, or at the very least given due acknowledgement. We suggest that this is something CMR has singularly failed to do concerning PPPs, which has had consequences for not only our research, but also our teaching curricula and postgraduate research students, which in turn perpetuates our myopia.

We duly acknowledge a relatively robust defence; that our vocational nature and key funding sources mean criticality is not always invited or welcome. As Ivory and Shipton (2019) have argued, drawing on Latour and Woolgar's (1979) "cycle of credibility" model of knowledge production in science, our primary objective as academics is to produce, not knowledge, but credibility. And this individual academic credibility, bought through publications in the right journals, creates the conditions for successful income generation and therein further publications, increased credibility and further income. The actual knowledge content is less relevant that "getting published" and "getting cited." This raises the issue of what counts as credible.

The proximity of many CMR academics to industry, and the need to support and engage with firms and the UK government for funding also inevitably creates pressures on academic freedom (Sherratt 2017). In an academic context where the influence of industry is so keenly felt, and indeed welcomed, then expressing critique, or suggesting solutions that require transformation and new thinking, might be seen as counter-productive, if not individually risky to careers, departmental reputations and essential external relationships. As CMR is often funded by industry, banks, and the UK government, whose own perspectives of PPPs have been unpacked above, we are operating in a research space in which fundamental ideologies and subsequent practices simply cannot be challenged academically without risking personal or organizational cost. Those who do ask wider questions, such as explicitly confronting the validity of the market itself, "look like dabblers" and find such approaches "undermines their credibility" (Marti and Scherer 2016, p. 306).

CMR has therefore aligned itself with the prevailing economic and financial discourses, and placed its faith in the private and not the public sector without comment or question. Both politics and CMR has arguably also simply become "trapped" by the language we use on this topic, a process that distorts not only the way we think about these issues, but also how we see them played out in reality.

Indeed we are faced with something of a tautological justification for PPP. Built Environment assets are a necessity for society, and so there is a very real problem that needs addressing within in a context of economic austerity following the financial crisis of 2008 (Villani *et al.* 2017) – we still need to build. PPPs are continuously defined by both politicians and CMR as something able to addresses this, for example PPPs have been empirically proven to be able to support the development of infrastructure (Cui *et al.* 2018) and utilize assets and data more productively (Tang *et al.* 2010), although to differing measures of success in practice. Therefore, and given that dominant political, economic and social discourses state that there is no alternative, PPP *must* be the solution: "creative thinking and innovative approaches, along with smart risk management are therefore *needed* to empower higher-value sustainable PPPs" to meet "accelerating demands for better value infrastructure and services" (Suranga Jayasena 2017 *our emphasis*). CMR has fully complied with this truism, and technocratically sought to improve PPPs in practice within our two dominant research domains. From this perspective, challenges from reality can be ignored as if we keep doing it, but doing it better, as we already have the solution in place: "it is easy to embrace and almost impossible to resist something that is presented as the best available solution to social problems framed as given" (Fougère *et al.* 2017, p. 827). CMR has been unable to resist thus far, and so has merely fed-into sustaining the PPP discourse, through a self-perpetuating research agenda that further supports the justification of their very existence.

Reshaping the CMR PPP research agenda

We suggest that CMR should mindfully step back and reflect on our current body of work. Grounded in the sciences, perhaps our academic field has a tendency to focus on highly specialist areas, our perspectives tend to be narrow and deep, leading to critical myopia. At times, generalisations are needed to enable and support critical and reflective activities, to ask the awkward questions without constraint, and that is what we have attempted to do here.

Arguably, we live in a period that is ripe for critique - although productivity has increased, wages stagnate and decline, leading to concentrations of wealth and inequality not seen for over a century (Economic Policy Institute 2018, Oxfam 2018), and this should have bearing when we are supporting mechanisms that have been shown to be at the root of this malaise (Whitfield 2016). To make recourse only to localised and limited economic logic, and to exclude morality and social justice, would not have ceased the work of children in the mills of the industrial revolution, for example. For those who consider morality beyond the scope of the academic, the facts and science should instead be readily able to convince: PPP doesn't work, and PFI certainly doesn't work, as demonstrated by the eventual actions of the UK Government in its abandonment.

Morality is also a concern of other PPP researchers. Narbaev *et al*. (2020, p. 122) identified that "…sustainable cooperation for the public and private sectors through their economic, social and environmental impacts are emerging topics in the PPP field," and these are areas CMR should perhaps lead on, looking to the notions of economic and social justice as our cornerstones rather than maintaining our current ethical myopia. Indeed, this should be welcomed by our community given the growing interest and concerns in CMR around social justice and value (e.g. Raiden *et al*. 2019), which has recently seen a welcome increase in prominence within our wider research agenda.

Critical management scholarship

We could also learn something from the field of Critical Management Studies (CMS), which explicitly speaks on behalf of the worker, challenging the dominance and demands of the market in organisational practices, including costs reductions, efficiencies and work intensification (Parker 2002). Key within CMS is also the determination to challenge technocratic approaches in practice. Particularly relevant for CMR and PPP is the "critical studies of projects," as exemplified by the Making Projects Critical stream of conferences and books (e.g. Hodgson and Cicmil 2006) and the ESRC funded "Re-thinking Projects Network (2004–2006)." However, we would argue that Critical Studies of Projects also need to broaden their critique, as has much CMS research, beyond its limited focus on the practice of management itself (e.g. Thomas, 2000, Cicmil, *et al*. 2006, 2009, Linehan and Kavanagh, 2006, Winter and Szczepanek 2009) and the ongoing influence of projects themselves as sites of exploitation (Packendorff and Lindgren 2014, Cicmil *et al*. 2016, Hodgson *et al*. 2016). There seems little discernible appetite to tackle the broader issues of the economic machinery within which projects take place. The broader critique of PPP has in fact been left to a-theoretical consultancies, think-tanks, journalists, public commentators and indeed government agencies such as the National Audit Office. So how can academia find its own critical voice and contribute to the re-design of public procurement in the built environment? Indeed, a re-statement of the role the public sector should play, even in the limited sphere of public procurement, may be taken up as a more general critique of existing economic arrangements.

In our view, critical scholars within CMR need to break out of their present narrow concern with poor and/or unethical managerial performance within projects and project coalitions (Barlow 2000, Grabher 2002) and networks (Pryke 2004), and seek to also address the larger socio-economic milieu of which projects are an aspect. We propose that a way forward for research based in takes a whole systems perspective together with an ethical sensibility based on equity and social value

Whole systems thinking

We believe that new approaches to research can contribute strongly here. Whole systems thinking, from a critical sensibility, is essential. Projects and delivery coalitions are not bounded entities, governed only by interior logic or their own emergent properties. It is clear that the execution of projects takes place in, and contributes to, a socio-economic network of interactions and exchanges which extend far beyond their own boundaries. They are an ensemble of payments, skills, theories, contracts, economic practices, local and national agreements, unions, norms of professional practice and legislative mechanisms that link all projects ultimately to governments and to financial institutions. PPP can therefore be thought of as a "special case" of the construction project, an expression of a particular combination of different elements (finance, theories, contracts, materials, government agencies, financiers, investors, the public interest, contractors and so forth) and to "be critical" of such projects, critical theory must seek to properly understand, deconstruct and critique these network ensembles. CMR scholars should make a contribution to new practices through theory at this level. Theories, as the completing acolytes of Friedman and Keynes clearly show, are powerful – they are in fact performative of how economies are organized. Indeed, markets do not exist as natural phenomena to be described or even critiqued, they are performed through the means that are used to describe and critique them, that is, by theories on how markets work (Callon 2007). Put another way, academic work which does not question the founding social and economic assumptions of PPP, is simply helping to perform and maintain them.

Invoking an ethical sensibility

Marti and Scherer (2016) draw on Jurgen Habermas' theory of knowledge-constitutive interests, to develop three key questions that should form the foundations of critical enquiry into financial systems, specifically when exploring the social welfare consequences of financial innovations: (1) Does it make the economy more efficient? (2) Does it make the economy more stable? (3) Does it make the economy more just? Although the first two questions of this simple framework for enquiry firmly align to contemporary market-focused ideologies, the latter does not – and we suggest it is our forbearance to ask this very question that is limiting CMR of PPPs, and thus constrains our theorising within this space. As we have shown above, the actual economic contexts in which we are supporting the use of PPPs are *not* just. CMR in its current form simply supports and reinforces the existing technocratic approach to financial (de)regulation. And by seeking optimisation of the means to realise the prescribed ends of only efficiency and stability, the rich get richer, whilst the poor get poorer and justice is left undone.

Critical CMR research should focus and a fuller understanding of how better systems of building procurement and finance might work in practice, and to do so they must also go beyond the presently narrow concerns of such systems. Following Marti and Scherer (2016)'s example, we believe that critical scholars in construction should be asking whole system questions such as: how do such systems of production re-distribute wealth? Which parties do they most unduly advantage and for whom do they create risk, loss and disadvantage? Moreover, we must create new analytical tools and models that describe precisely how these distributions are achieved. We should, in analytical terms, account for how such systems create public goods. Do they, for example, typically enhance the motivation of different parties to innovate and deliver buildings and infrastructure that enhance public life?

Re-imagining new systems should be a priority; it is clearly not enough to establish ever stronger governance mechanisms to control socio-economic systems that are demonstrably malfunctioning. We need critical management research that can propose new models of production and financing entirely, and given our place in the specific PPP arena CMR should arguably be at the forefront of such developments. As Koskela (2017) has pointed out, major contract innovations tend to come from industry, not academia. This has to change, and the collapsing credibility of PPP provides us with an excellent opportunity. However, to grab this opportunity, we need to broaden our focus and seek to introduce new contractual discourses of social justice, equity and fairness. We need to be prepared to think and say the unsayable, in so doing we may also fill the gap in the discipline for theory in projects (Soderlund 2004, Koskela 2017).

There is an alternative

As researchers and public servants we have an ethical and professional duty to inject new discourse into the procurement of public works – discourse that ensures questions of fairness and social justice are legitimate and essential points of discussion and decision making in contract allocation and for the arrangement of project financing. We must also, as More (2014) has suggested in respect of government services, "account" for the public good in all construction activity.

We should explicitly challenge the dominant discourses that shape our economic landscape, we need to challenge the technocratic directives to keep doing what we're doing, and direct CMR to just find a way to keep doing it better. We need to research PPP from economic, practice and social justice perspectives. We must accept that there is an alternative. As "experts" in this field, we need to take this responsibility on, and contribute to a more inclusive and discussion, one that duly acknowledges issues of social justice, and that can better serve society as a whole.

To that end, we challenge CMR to engage more broadly and fully with the subject matter of our research, and therefore call for:

1. More critical and constructive work, to explore and realise new economic models and financing arrangements that deliver more equitable outcomes for society through built asset provision;
2. The further development of whole systems thinking within CMR, to unpack the social, economic and political forces that shape how projects are carried out;
3. CMR to draw on, engage more fully with, and be inspired by other fields of expertise in economic analysis, finance and critical thought.

Conclusions

Since the 1990s, PPPs are part of the way the UK construction industry has worked, and PPPs in various forms can now be found all over the world. The UK construction industry boomed following the introduction of PPPs, yet whilst it was building, its economy was faltering: the "moral hazard" of government involvement become realised, their influences on a notionally "free market" began to have negative effects, and unprecedented increases in debt-fuelled growth all meant something had to give. And it did. But although the notion that There Is No Alternative was able to prop up an ailing economic system in 2008 (and continues to do so today), it was not able to save Carillion. The second largest UK construction company with a hundred years of history went into compulsory liquidation in January 2018.

As stated in the introduction, this paper did not intend to be a holistic critique of PPP, nor did it seek to unpick the collapse of Carillion in any depth, indeed that hadn't even happened when this paper was first conceived. It did not intend to be objective, nor balanced, nor anything other than a challenge to CMR academics to more robustly consider wider contexts, on both national and global stages, when evaluating and researching construction procurement and PPPs. We urge the CMR community to reflect on what we have presented here, to go beyond the contractual mechanisms, the partnering processes and the project success factors that affect PPPs, and instead to seriously consider what political, economic and social systems we are helping to perpetuate and what consequences they can bring.

We also challenge CMR to become more critical in our research approaches overall, and to draw more robustly on other fields of scholarship and go beyond "the project" and to look to the wider systems they are produced and perpetuated by. We should ask ourselves a little more firmly if we are content to support organisations in continuing their economic opportunism and exploitation of the public sector, and continue to realise vast profits from a mechanism based on the stroke of a banker's pen. We should also ask ourselves if we are content to inflict such procurement mechanisms in countries with emerging economies, that are perhaps more vulnerable than the UK – although vulnerability is of course in the eye of the beholder. We should begin to explore, both theoretically and empirically, other ways of doing things, and so robustly challenge the notion that there is no alternative. There is.

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