

# **ANALYSING THE DISCOURSES SURROUNDING CHANGE AND REFORM IN THE CONSTRUCTION SECTOR: THE NEED FOR A MARRIAGE BETWEEN CRITICAL THEORY AND A SOCIO-HISTORICAL CULTURAL PERSPECTIVE**

**John-Paul Smiley,<sup>1</sup> Andrew Dainty and Scott Fernie**

*School of Civil and Building Engineering, Loughborough University, Leicestershire, LE11 3TU, UK*

Attempts to drive change and reform of the UK construction industry have been an on-going concern for numerous stakeholders, both in government and across industry, for years. The issue is a seemingly perennially topical one which shows little sign of abating. The current UK coalition government has recently ordered a wide ranging review of building standards and regulations, including health and safety and energy efficiency, in an attempt to cut ‘red-tape’, reduce costs, get industry moving and provide a boost to the flagging economy. Scholarly analyses of the reform agenda have tended to adopt a Critical Theory perspective. Such an approach, however, lacks a certain nuance and perhaps only reveals one layer of social reality. That various social actors in competition for scarce resources vie with each other for power and control reveals only a partial insight. What is arguably lacking is a more fundamental exposition concerning the historical, social and cultural explanatory forces at play. Whilst it is illuminating to expose vested interests, ideology and power, what has led to the development of various views? How have they come to achieve such high accord in discussions? Drawing on the works of Max Weber, Georg Simmel and Barbara Adam, this paper seeks to develop a broader theoretical lens in order to gain an appreciation of the forces influencing the development of the motivations and normative views of key stakeholders of the policy-making process. It considers the wider socio-cultural structures and forces that influence behaviour, shape and constrain these views. This approach will contribute to a much needed broader philosophical and theoretical debate within the construction management community (and beyond) on the need to better engage with and understand the cultural sources influencing the perennial issue of policy formulation and diffusion in the built environment that consistently fails to deliver expected reforms.

Keywords: culture, construction, money, policy, time

## **INTRODUCTION**

The recently ordered wide ranging review of building standards and regulations, including health and safety and energy efficiency, is stated to be an attempt to cut ‘red-tape’, reduce costs, get industry moving and provide a boost to the flagging economy (Jowit: 2012). The industry is arguably being treated once more as an

---

<sup>1</sup> J.Smiley@lboro.ac.uk

---

Smiley J, Dainty A and Fernie S (2013) Analysing the discourses surrounding change and reform in the construction sector: the need for a marriage between critical theory and a socio-historical cultural perspective *In:* Smith, S.D and Ahiaga-Dagbui, D.D (Eds) *Procs 29<sup>th</sup> Annual ARCOM Conference*, 2-4 September 2013, Reading, UK, Association of Researchers in Construction Management, 445-454.

economic regulator, with government expenditure responding to a precarious political and monetary milieu. (Ball: 1988). This is in some ways understandable in an era of austerity ushered in by the current financial crisis with global markets continuing to lack confidence and fiscal security looking continuously uncertain, particularly across Europe. Previous discourse(s) surrounding change and reform drew from the Latham and Egan reports (among others) to develop a series of recommendations for change and reform. These have been complemented and reinforced by the ‘Technology Foresight Report’ (1995), ‘Modernising Construction’ (2001), ‘Accelerating Change’ (2002) and the Wolstenhome report (2009). Notably, ‘Sir Michael Latham’s proposals were warmly supported by all political parties throughout the country’ (Cahill and Puybaraud in Murray and Langford: 2003: p. 150) and this has arguably been the case with proposals arising from all reports mentioned above. That there is wide consensus across the political spectrum for these proposals and recommendations is perhaps indicative of a more fundamental underlying cultural predisposition. This paper suggests that hidden beneath the rhetoric of discourses for change and reform in construction are a multitude of power relations, vested interests, taken-for-granted norms, values, assumptions and cultural attitudes which are rarely articulated, let alone challenged. To address this, research that adopts Critical Theory coupled to a broad socio-historical cultural perspective is argued to form a robust theoretical and analytical lens through which to explore afresh construction discourses and explain the cultural predispositions which influence them. These arguments and lenses are initially developed through a brief examination of research that has sought to explore two pivotal industry reform recommendations; Building Information Modelling (BIM) and Partnering. The arguments are then further sharpened by turning attention towards that spectre of social science; the ‘Iron Cage’.

## BIM

According to Davies and Harty (2012) exploring BIM via issues of control, surveillance and power exposes an assumption by researchers that diffusion is considered to be largely, ‘...unproblematic technical activities...positioned as politically neutral and generally beneficial...’ (Davies and Harty: 2012: p. 24). They argue, quite convincingly, that prescriptions flowing from such assumptions are too readily accepted by a multitude of stakeholders without due thought or critical examination. But, whilst useful, their research offers little insight into the cultural predispositions of those with vested interests in developing and diffusing BIM to explain the assumptions adopted. In other words, why do they hold the particular cultural interests they do? If we consider the diffusion of BIM to be a social endeavour and not a neutral, value free technological prescription, then immediately we are faced with a question of how and why this has come into being? What does this reveal about social relations in the particular cultural milieu in which it has emerged? How has the prescription referred to as ‘BIM’ come to be seen as a ‘rational’ course of action? Why has it emerged at this particular time? Why has it been so ‘persuasive’ to so many and why are ‘control’ and ‘surveillance’ deemed necessary and desirable components in construction projects? Perhaps more importantly, to what end?

It is also interesting to consider the role of time and its absence from much literature. Though BIM is alluded to in terms of reducing time (which interestingly has come to be linked historically with ‘efficiency’), time is an all too often taken for granted aspect of culture. It is often reified and treated as an unalterable, objective aspect of our reality. The differences, for example, between the uniform, commodified,

decontextualized nature of the time inherent in BIM and other ICT prescriptions that employers attempt to impose on their workforce and the variable, contextualised nature of time as humans actually experience it are rarely explored (Adam: 1995; Chan: 2012). Whilst Summerfield and Lowe (2012) highlight the connection between culture and BIM, variances in time perceptions between those of different cultural backgrounds are rarely discussed and an understanding of such would seem important in a world where companies have ever increasingly diverse workforces. Indeed, the importance of, and need to engage with a more holistic appreciation of time is all too often missing from construction management literature (Chan 2012). That such a narrow perception of time has come to be predominant and that an arguably increasingly homogenous discourse surrounding construction ‘improvements’ is emerging worldwide is a point that shall be developed later on. What is needed, however, is a description and knowledge of the primordial soup from which various cognitive frames and discourses emerge, without which no understanding of said discourses, values, attitudes and behaviours can be complete.

To adequately understand the development and diffusion of BIM prescriptions then, and their relationship with and impact upon human thought and behaviours, we arguably need to attempt a genealogy of time, values, belief and culture.

## PARTNERING

The discourse(s) surrounding partnering offer an interesting theoretical departure point in which to consider calls for change and construction ‘improvement’. Bresnen and Marshall (2000) problematize the issue of partnering and highlight its contested definitional and conceptual nature and the role of power and vested interests (both between and within organizations) that shape partnering practice. In the absence of a wider cultural perspective to complement their critical approach, however, their research, and others drawing from the discourse of partnering, arguably offers an incomplete picture. For example, they do not explain why values such as reduced time, lower costs, greater speed and efficiency have come to dominate partnering discourse(s) and appear to be privileged over other potential values?

With its calls for long-term relationships and stability, the rhetoric of partnering arguably mirrors wider societal norms and values and calls for stable, monogamous relationships as a way for a healthy, productive, stable life. This can be contrasted with the increasing liquidity and fluid nature (which some might pejoratively label as promiscuous) of interpersonal relationships in modern life, (see Bauman: 2000, for example). From this perspective, calls for partnering could perhaps be seen as conservative endeavours, reflecting societal norms which seek to maintain or perhaps reintroduce prevailing traditional societal norms and values and bring a modicum of perceived morality to business practices with the sector. Or, perhaps more cynically, partnering could be characterised as marriages of convenience, based solely on desires for financial security and stability, rather than other, nobler notions. But, either way, there are still questions as to how and why these particular discourses of morality have come to be so dominant within the industry reform discourse.

Using an institutional theory perspective, Gottlieb and Jensen (2012) also consider the rise of partnering discourse, this time in the Danish context:

‘The following analysis takes its starting point in 1990 and continues to the present day. It focuses exclusively on the development of partnering in Denmark and does not consider the development in other Nordic or European

countries, neither when discussing international influences on Danish development, nor in relation to the ‘cultural traffic’ of change principles and recipes across nations’ (Gottlieb and Jensen: 2012: p. 162).

Whilst they argue that the study’s findings should only be thought of as applicable to the Danish context in particular, it is arguably limited in even providing that, without the wider and deeper insights required. As such they call for future studies to explore, ‘...how and why different variants of partnering emerge over time and place and how to understand the relationship between macro-level industrial change and local project practices’ (Gottlieb and Jensen: 2012: p. p. 168). Such studies are arguably understood as necessary to provide a broader understanding of the transnational historical and cultural influences at work. Research of this nature would also concede that neither the Danish construction industry nor the concept of partnering have emerged from a vacuum and that, as a result, an understanding of the historical and cultural antecedents are essential to deepening any contextual understanding of change and reform recommendations.

## **POWER, HISTORY, AND CULTURE – AN INSEPARABLE MIXTURE**

Drawing inspiration from the Frankfurt School and Critical Theorists such as Horkheimer, Adorno, and Habermas, a Critical Theory approach to organization and management research in the built environment has sought to, ‘...interrogate and challenge received wisdom about management theory and practice’ (Alvesson and Willmott: 2003: p. 1). But whilst such critical perspectives have previously been adopted to highlight the importance of ideology, vested interests and power struggles inherent in calls to reform, they are limited to revealing only partial insights framed around the obvious – that social actors in competition for scarce resources vie with each other for power and control. The use of dialectical thinking in this body of research, so typical of a Critical approach, whilst informative is arguably overly simplistic and rests upon a hidden taken-for-granted teleology. Highlighting the role of the ideologies which lay behind the rhetoric surrounding ‘improvement’ is a valid yet incomplete contribution. This is because, ideology and power, as Lawson (2006) notes, are, ‘...important, but alone merely represent the locally mediated expression of underlying networks of social relations’ (Lawson: 2006: p. 21). Sage et al (2010) further warn of dialectics becoming, ‘...an un-reflective way of generating new concepts; driving forward closed syntheses of unexamined binary oppositions’, within critical projects thinking (Sage et al: 2010: p.545). This is not meant to dismiss a Critical approach at all, as there is great value in it as a theoretical lens. Critical Theory offers a valuable piece of the puzzle, so to speak, but only a piece. It does not adequately reveal how and why behaviours, vested interests and power struggles evolve or explain their development into particular shapes and forms. It is almost as if such circumstances are to be treated as an inevitable and inalienable part of human existence. But such an assumption arguably rests on an unwarranted view of human nature, one which makes of central importance the presence of competitive urges and conflict at the expense of other, differing conceptions, for example, that of mutual aid and cooperation (Kropotkin: 1902). Furthermore, such assumptions neglect the idea that the various actors involved, even dominant ones, are themselves humans influenced and shaped by the prevailing discourses and social milieu of their times. After all, how is it determined that someone represents a ‘powerful’ or ‘dominant’ actor in the first place? And why do the powerful seek the particular interests they do, as opposed to others?

Whilst some scholars (for example, McCabe: 2007, who very usefully traces the historical developments which influenced the current ‘Respect for People’ agenda) have recognised the importance of history in the formation of reform policies, there is still little discussion of the wider cultural dimensions at work. For example, the idealizing and prioritizing of efficiency, rationality and the desire for speed is arguably specific to a particular time and space/place in human history and the result of human artifice. It has not always been this way and need not always be in the future. To engage with and understand reform at a deeper level, it is necessary to develop views concerning the historical, social and cultural explanatory forces at play (Hempel: 1942). Such research would inevitably reveal wider and more profound insights into vested interests, ideology and power by explaining what led to the development of such views; how they had come to achieve such high accord in discussions and; why certain discourses (and related policies) have emerged at the expense of others at particular times. Central to this is an acceptance that actors are subjects embedded in particular historical periods and influenced by a prevailing socio-cultural milieu of their times. Or, as Marx observed,

‘Men make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given and transmitted from the past. The tradition of all the dead generations weighs like a nightmare on the brain of the living’ (Marx: 1852/1970: p. 15 in Ritzer and Goodman: 2003: p. 44).

In summary, a deeper understanding of improvement discourses in the UK construction industry must engage with and explore the various socio-historical cultural factors and forces at play.

### **THE ‘IRON CAGE REVISITED’, AGAIN**

Thirty years ago, DiMaggio and Powell (1983) wrote of the increasingly homogenous nature of organizational discourse and sought to, ‘...explain homogeneity, not variation’ (DiMaggio and Powell: 1983: p. 148). Thirty years on and arguably the relentless march towards increasing homogenization has continued with the uncritical acceptance of various improvement prescriptions with repeated emphases on ‘efficiency’, ‘value’ and ‘productivity’. Such characteristics, as Ness and Green (2012) have commented, ‘...have become naturalised; they are seen as commonsense by all or almost all the participants and thus not seen as ideological or as representing the position of those with most power’ (Ness and Green: 2012: in Dainty and Loosemore [eds] p. 25). But how has this come to be the case? An appreciation of this subject only becomes more visible through a more thorough, critical examination with history, culture and the social. It is especially interesting to consider the roles of Weber, Simmel and Adam. For although it is essential to consider discourse, rhetoric and the power relations enshrined in them, there is little insight into the way said relations come about. A tentative theoretical premise then will be that the development of a papered moneyed economy (Simmel: 1907), along with the standardization and decontextualization of time from the 1800s onwards (Adam) have led to an increasing predominance of instrumental rationality at the expense of other competing forms of rationality (Simmel: 1903; Weber: 1904). This has, in turn, been spread globally through a combination of both the diffusion of new technologies and the collapsing of space and time that said new information technologies has afforded (Castells: 2004) and by the spread of neoliberalism thought and practices by the leading actors of our times (neatly characterized by Green (2011) as the ‘Enterprise

Culture'). In fact, the discourse referred to as 'Neoliberalism' could only arguably have come about as a result of the above combination of forces and events. Critically, the varied combination of processes commonly referred to as 'globalisation' can themselves be considered as, '...an ideological assertion rather than a description of inevitable economic and cultural processes' (Faulks: 1999: p. 70). This particular combination of events, like a slow-setting cement mixture, has gradually began to harden, with discourses surrounding construction 'improvements' becoming ever more intractable, unmoveable, and unimaginative as a result.

The political philosopher Michael Oakeshott, himself a staunch critic of the turn to Rationalism, stated,

'But what, at first sight, is remarkable, is that politics should have been earlier and more fully engulfed by the tidal wave [of rationalism] than any other human activity. The hold of Rationalism upon most departments of life has varied in its firmness...but in politics it has steadily increased and is stronger now than at any earlier time' (Oakeshott in Callahan: 2008: p. 26).

It is through the socio-historical theoretical lens stated above that we may arguably hope to begin to make sense of the ever increasing tendency for this particular type of rational thought to dominate policy development, construction debates and, indeed, everyday contemporary existence. The potential for humans to cognitively perceive differing perspectives is constrained by a particular combination of biological, historical and cultural forces. Indeed, could it not be considered that an individual's psychological frames, predictions, habits and preferences are a causal result of cultural forces? Or that they are a result of mutually constitutive forces which interact with, shape, and constrain each other against a backdrop of culture which limits the potential variety and plasticity of any user experiences? From this perspective, it is not so remarkable that this specific type of instrumental rationality would begin to be privileged over other, competing forms of knowledge, for, as Simmel stated,

'Money economy and the dominance of the intellect are intrinsically connected...it reduces all quality and individuality to the question: How much? All intimate emotional relations between persons are founded in their individuality. Whereas in rational relations man is reckoned with like a number...' (Simmel: 1903: p. 3).

The abstract, impersonal nature of money (particularly papered money) alters social and exchange relations, impacts psychological frames and, combined with the advent in 1913 of 'Global time', with the first wireless time-signal sent from the Eiffel Tower, and the increasing decontextualisation and commodification of time (Adam: 1995), has meant the stripping of, '...both work and time from their contextual meanings...' (Adam: 1990: p. 116). This has led to an increasing predisposition to an instrumental means-end rationality that prioritizes the efficient maximization of monetary gains at the expense of other competing values. This cultural predisposition, spread and perpetuated by the dominant wealth possessors of our times, has become our very own 'Iron Cage'. That is, a dominant cultural intellectual discourse so engrained that many social actors (intellectuals and lay-persons alike) have difficulty even imagining 'viable' alternatives. To borrow a turn of phrase from the economist J. K. Galbraith (1958), a new 'conventional wisdom' is born. This has led to a situation where, 'Each individual's opportunity to create and develop becomes increasingly restricted by intellectualization, rationalization (including the sphere of law), and the "calculating exactness" of modern times' (Capetillo-Ponce: 2005: p. 117). Notions of

'Best practice' must be seen as reflective of and linked to more fundamental philosophical assumptions regarding what actors conceive to be the 'Good life'. And these visions of the 'Good life' have not emerged in a vacuum but are the result of a combination of numerous cultural, historical and biological factors.

An appreciation of this helps to place into context the repeated emphases by those calling for reform and change in construction on value for money (for both business and clients alike) in successive reports ranging from Banwell through to Latham and Egan and the National Audit Office's (2004) Getting Value for Money from Construction Projects Through Design. This is a sentiment so stubbornly entrenched that the Royal Institute of Chartered Surveyors (RICS) recent (2013) publication simultaneously reports that, '...the Coalition Government...need to make efficiencies and reductions in the cost of the construction they procure', whilst proudly proclaiming their creation of a new standard which can, '...help reduce spending on individual projects and allow for more projects to be delivered within restricted budgets' (RICS 2013: p. 10). The more things change the more they seemingly stay the same! It also goes some way to understand the currently booming 'business of BIM' with a plethora of expensive workshops and courses increasingly being offered for this 'essential' prescription; arguably prioritizing money at the expense of workers' health and safety and ability to balance life and work more generally. Interestingly, from a sociological perspective, we can link the calls for 'Respect for People' with the moral discourses surrounding 'clean' and 'dirty' money (Baker and Jimerson: 1992). Monies are inextricably embedded within the wider social milieu in which they emerge and how they are exchanged, distributed, and accumulated matters to the social actors involved, with debates reflecting the prevailing moral discourses prevalent at the time. So, 'Respect', in this context, is linked to both practices and remuneration which are perceived to be fair (however 'fair' is defined by the various actors involved). And debates, both within the Human Resource Management literature and illustrated in the actions of unions, fighting for perceived improvements in working conditions, must be considered as competing discourses which represent a negotiation of contemporary morality. But what has led to the emergence of these particular discourses in the first place? How have these specific moral sentiments amongst the various actors present evolved? It is important to ask such questions as a much needed corrective measure for a great deal of the academic and policy literature which does, '... not provide explicit reflection on the values or interests such 'policy implications' are meant to advance (Bartram: 2010: p. 355).

## CONCLUSION

It is not enough to shine a light on inequalities, power differentials, and vested interests. In attempting to understand the various calls for change and reform in construction, it is important to understand the numerous forces which have led to both past and current discourses. By combining a Critical approach with a more fundamental socio-historical cultural lens, a more detailed, nuanced and sophisticated understanding can be achieved. There is arguably a moral imperative for us, as a community of researchers, to critically examine the genealogy of norms, values, attitudes, and behaviours, including our own. Why do we esteem certain values at the expense of others, how has this come to be the case historically? How have we arrived at the particular cultural milieu we currently experience? By even attempting to answer such questions, by fostering this sort of reflexive, hyper-critical attitude, assumptions and taken for granted attitudes can be challenged, made explicit, and transparent. A more honest and humble debate, informed by knowledge of the sources

and influences of various discourses is essential. Without such an effort, the unreflective majority will continue to aimlessly stumble on and even well-meaning critics will have difficulty finding inventive solutions to perceived problems. After all, attempts to think outside the box necessarily depend on the contours and characteristics of the box. But,

'Since such forces of life have grown into the roots and into the crown of the whole of the historical life in which we, in our fleeting existence, as a cell, belong only as a part, it is not our task either to accuse or to pardon, but only to understand' (Simmel: 1903: p. 10).

## REFERENCES

- Adam, B. (1990) *Time & Social Theory*, Cambridge: Polity Press.
- Adam, B. (1995) *Timewatch: the social analysis of time*, Cambridge: Polity Press.
- Alvesson and Willmott [eds] (2003) *Studying Management Critically*, London: SAGE Publications
- Baker, W., and Jimeson, J. (1992) 'The Sociology of Money', *American Behavioral Scientist*, Vol. 35, No. 6, pp. 678 – 693.
- Ball, M. (1988) *Rebuilding Construction: Economic Change in the British Construction Industry*, London: Routledge Press.
- Banwell, Sir Harold (1964) *The Placing and Management of Contracts for Building and Civil Engineering Work*. HMSO, London.
- Bartram, D. (2010) 'The normative foundations of 'policy implications': reflections on international labour migration', *Work, Employment, Society*, Vol. 24, No. 2. pp. 355 – 365.
- Bauman, Z. (2000) *Liquid Modernity*, Cambridge: Polity Press.
- Bresnen, M. and Marshall, N. (2000) 'Partnering in construction: a critical review of issues, problems and dilemmas', *Construction Management and Economics*, Vol. 18, pp. 229-237.
- Cahill, D and Puybaraud, M C 'Constructing the Team: The Latham Report' in Murray, M. and Langford, D. [eds] *Construction Reports – 1944-98*, pp 145 -160, Oxford: Blackwell Publishing.
- Callahan, G. (2009) 'Michael Oakeshott on Rationalism in Politics', *The Freeman-Ideas on Liberty*, Vol. 59, No. 1, Foundation for Economic Education.
- Capetillo-Ponce, J. (2004/5) 'Contrasting Simmel's and Marx's Ideas on Alienation', *Human Architecture: Journal of the Sociology of Self-Knowledge*, Vol. III, Nos. 1&2, Fall 2004/Spring 2005.
- Castells, M (2004) *The Power of Identity*, The Information Age: Economy, Society and Culture Vol II, Oxford: Wiley-Blackwell Publishing.
- Chan, P (2012) 'Constructing a sense of time in projects: Implications of a Bergsonian view of time', In: Smith, S.D (Ed) Procs 28th Annual ARCOM Conference, 3-5 September 2012, Edinburgh, UK, Association of Researchers in Construction Management, 497-507
- Davies, R and Harty, C (2012) Control, surveillance and the 'dark side' of BIM In: Smith, S.D (Ed) Procs 28th Annual ARCOM Conference, 3-5 September 2012, Edinburgh, UK, Association of Researchers in Construction Management, 23-32.

- DiMaggio, P J and Powell, W W (1983) 'The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields', *American Sociological Review*, Vol. 48, No. 2, pp. 147 -160.
- Egan, Sir John. (1998) *Rethinking Construction*. Report of the Construction Task Force to the Deputy Prime Minister, John Prescott, on the scope for improving the quality and efficiency of UK construction. Department of the Environment, Transport and the Regions, London.
- Faulks, K. (1999) *Political Sociology: A Critical Introduction*, Edinburgh: Edinburgh University Press.
- Fernie, S., Leiringer, R., and Thorpe, T. (2006) 'Rethinking change in construction: a critical perspective', *Building Research and Information*, Vol. 34, No. 2, pp. 91 – 103.
- Galbraith, J. K. *The Affluent Society*, London: penguin Books Ltd.
- Gottlieb, S.C., and Jensen, J.S. (2012) 'Making sense of partnering: discourse, governance and institutional change', *Engineering Project Organization Journal*, Vol. 2, No. 3, pp. 159 – 170.
- Green, S. D. (2011) *Making Sense of Construction Improvement*, Oxford: Wiley-Blackwell Publishing.
- Hempel, C. G. (1942) 'The Function of General Laws in History', in Martin, M and McIntyre, L. [eds], *Readings in the Philosophy of Social Science*, London: MIT Press.
- Hollis, M. (1994) *The philosophy of social science: An introduction*, Cambridge: Cambridge University Press.
- Jowitt, J. (2012) 'Government orders building standards review', *The Guardian* [online], 26th October 2012. Available online at: [www.guardian.co.uk/politics/2012/oct/26/government-building-standards-review-regulation](http://www.guardian.co.uk/politics/2012/oct/26/government-building-standards-review-regulation) [Accessed on the 26th October 2012]
- Kropotkin, P. (1902/1989) *Mutual aid: a factor of evolution*, Montreal: Black Rose Books.
- Latham, Sir Michael (1994) *Constructing the Team*. Final report of the Government/industry review of procurement and contractual arrangements in the UK construction industry. HMSO, London.
- Lawson, J. (2006) *Critical Realism and Housing Research*, London: Routledge.
- McCabe, S. (2007) 'Respect for people – The dawn of a new era or mere rhetoric?', in Dainty, A., Green, S. and Bagilhole, B. [eds] *People and Culture in Construction – A Reader*, London: Taylor and Francis Group.
- NAO (2001) *Modernising Construction*. Report by the Comptroller and Auditor General of the National Audit Office, The Stationery Office, London.
- NAO (2004) *Getting Value for Money from Construction Projects through Design*. Report prepared by Davis, Langdon & Everest, National Audit Office, London.
- Ness, K and Green, S. D. (2012) 'Human resource management in the construction context: disappearing workers in the UK' in Dainty, A and Loosemore, M [eds] *Human Resource Management in Construction – Critical Perspectives – 2nd Edition* (2012) pp. 18 – 50.
- OST (1995) *Technology Foresight: Progress Through Partnership*, Office of Science and Technology, London.
- RICS (2013) *RICS Construction Policy*. Report prepared by the Royal Institute of Chartered Surveyors, March 2013, London.

Smiley, Dainty and Fernie

- Ritzer, G. and Goodman, D. J. (2003) Sociological Theory – Sixth Edition, London: McGraw Hill Publishing.
- Sage, D.J., Dainty, A.R.J. and Brookes, N.J. (2010), A Consideration of Reflexive Practice Within the Critical Projects Movement, *International Journal of Project Management*, Vol.28, No.6, pp539-546.
- Simmel, G. (1903) 'The Metropolis and Mental Life', Available online at:  
[www.altruists.org/static/files/The Metropolis and Mental Life \(Georg Simmel\).htm](http://www.altruists.org/static/files/The%20Metropolis%20and%20Mental%20Life%20(Georg%20Simmel).htm)
- Simmel, G. (1907) The Philosophy of Money, Third Edition – Edited by David Frisby (2005), London: Routledge.
- Strategic Forum (2002) Accelerating Change, Rethinking Construction, London.
- Summerfield, A.J., and Lowe, R (2012): Challenges and future directions for energy and buildings research, *Building Research & Information*, 40:4, 391-400.
- Weber, M (1904/2011) The Protestant Ethic and the Spirit of Capitalism, Oxford: Wiley-Blackwell Publishing.
- Wolstenhome, A. (2009) Never Waste a Good Crisis, Constructing Excellence in the Built Environment, London.