

TREADING THE SOFTER AREAS OF CONSTRUCTION MANAGEMENT: A CRITICAL REVIEW OF CULTURE

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Culture has to a large extent been utilised as the 'black box' reason for many of the construction industry ills, with many parties, through reports and other means, calling for a 'cultural change' in the industry. Fundamental to such change is the need to fully investigate and understand the manifestations and effects of culture in the industry. However, relatively little, by way of research, has been done in this area due mainly to the generally recognised complexity of the subject and its 'soft' and subjective nature. As a prelude to an investigation into the impact of organisational culture on the performance of UK contractors in furtherance of research in this genre, this study presents an overview of culture and a critique of current research into culture in the construction industry. The common theme from the review is that culture comprises the practices peculiar to a group and the underlying values shaping them. Within construction, culture is perceived as comprising the characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry, and the goals, values and strategies of the organisations they work in. A few studies within the construction domain have touched on national, industry, organisational and occupational culture, highlighting such critical issues as antagonism and international cultural diversity and their potential impact on the practices and output of the industry, and this provides evidence of a growing awareness of the importance of culture in the overall performance improvement agenda of the industry.

Keywords: construction industry, culture, organisational culture.

INTRODUCTION

Construction industry reports since Simon (1944) have continued to berate the culture of the construction industry and in particular, the adversarial and antagonistic aspects that have persistently plagued the industry and affected performance. A significant number of published research papers have done likewise, blaming many of the industry ills on culture. The general consensus is that there is a need for cultural change within the construction industry for performance to be improved. There is therefore the need for investigation into the manifestations and effects of the phenomenon of culture and particularly its effects on performance. As a first step in this direction, this study interrogates the phenomenon of culture and explores literature within the construction domain, on research undertaken in this genre, the aim being to explore the evolution of the term 'culture,' to get a fuller understanding of what it represents, the key concepts and models used in its study, the extent to which it has been researched in construction management, and the scope that still exists for further research.

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THE PHENOMENON OF CULTURE

Much as a lot of effort has gone into attempts to develop a definitive interpretation of culture, this goal appears to have eluded the many researchers exploring this area. This situation can be attributed to the various perspectives from which the concept of culture can be approached and is evidenced by the plethora of definitions available, with Kroeber and Kluckhohn (1952), for instance, reported to have compiled a list of 160 different definitions of culture (Bodley, 1994). In many ways, the study of culture has been likened to the story of the six blind men and the elephant as interpreted by Saxe (1963), and as used metaphorically by Roberts and Boyacigiller (1993) when they questioned “is the elephant too large or the researcher too blind?” (Roberts and Boyacigiller, 1993).

Whether the elephant (culture) is too large or the researcher too blind, the specific concept of culture that a particular researcher adopts is an important matter as it may influence the research questions asked, the problems investigated, the methods applied and/or the interpretation of results (Bodley, 1994). This implies that in undertaking any critical investigation into any aspect of culture, the researcher needs to define the perspective of culture being assumed in order to set the context within which the research can be considered as being valid. A working definition must therefore precede any discussion on culture in construction.

Defining Culture

Barthorpe *et al.* (2000), in presenting an overview of culture, examined the evolution of the term from its association with cultivation of land and production of crops, to current views as the totality of socially transmitted behaviour patterns, arts, beliefs, institutions, and all other products of human work and thought (American Heritage Dictionary, 2000). Its modern definition of socially patterned human thought and behaviour is attributed to renowned anthropologist Edward Tylor, who is believed to have first used the term in its anthropological sense (Barthorpe *et al.*, 2000). Tylor defined culture as “that complex whole which includes knowledge, belief, art, morals, laws, custom, and any other capabilities and habits acquired by man as a member of society” (Rooke, 2001).

A cross-disciplinary definition of culture proposed in Hofstede (2001) was that culture is “transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour and the artefacts produced through behaviour.”

Another well-known anthropological consensus definition took culture to be patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artefacts (Kroeber and Kluckhohn, 1978). This definition is akin to Bodley’s (1994) simplified representation of culture as “what people think, what they do, and the material products they produce.” Hofstede (2001) also defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another.”

Culture acts like a template and shapes behaviour and consciousness within a human society from generation to generation (Miraglia *et al.*, 1999). Essentially, it operates as a decodifier (Serpell and Rodriguez, 2002), defining situations and words, and giving them new meaning. It is manifested tangibly, in the form of symbols, heroes and rituals (Hofstede, 2001).

Culture exists in a constant state of change (Miraglia *et al.*, 1999), and this may account, to some extent for the difficulty in defining it. But however difficult defining

culture has been and continues to be, there are a number of themes common to all the different interpretations reviewed. Among these are the fact that:

- Culture is learned and shared;
- Culture is determined by contextual factors, implying that it is peculiar only to the group to whom these factors apply;
- The underlying basic problems are common and include relation to authority, concept of masculinity and femininity, and ways of dealing with conflicts; and
- Culture shapes behaviour and manifests in the form of values and practices.

In the context of this study therefore, culture is considered as the values and system of meanings peculiar to a group of people that are learned and shared by all the individuals in the group through dealing with the basic problems of life and through their interaction with the contextual factors relating to the environment in which they live, and it is the mould in which their behaviour is defined.

All these definitions however, including the above proposition, can only be considered part of the on-going debate about what 'culture' should be taken to mean.

The phenomenon of culture can be approached from a number of different perspectives. In the first place, culture can be considered from the anthropological, sociological or psychological perspectives. It can also be approached from the levels at which the phenomenon is observed. Arguably, culture can be observed at a regional, national, industry, organisational as well as occupational level. A third set of perspectives, which also reflects in culture research, is the convergence and divergence perspectives (Abu Bakar, 1998) which focus on finding commonalities or differences in cultural characteristics. Trompenaars and Hampden-Turner (1997) referred to a situation of 'glocalisation' vis-à-vis this dilemma of convergence or divergence. All these perspectives reflect the myriad of approaches that can be adopted in cultural studies and any such approaches adopted in research must be clearly identified and justified to avoid ambiguity and over-generalisation.

Key principles in cultural studies

Systematic studies into the phenomenon of culture must be underpinned by sound principles. To this end, it is important to recognise that culture (like a force), is an intangible concept observable only through its manifestations in verbal and behavioural forms (Hofstede, 2001). Such phenomena are typically described as constructs (Hofstede, 2001). Just as an assessment of forces will consider such aspects as magnitude and direction, an assessment of constructs of culture requires the identification of aspects important to culture. These aspects are referred to as dimensions of culture and various researchers have emphasised different dimensions depending on what was considered important in the culture being studied.

Hofstede (1984) for instance developed a 'Value Survey Module' (VSM) based on the dimensions of power distance, uncertainty avoidance, masculinity/femininity, and individualism/collectivism. Claims made about a bias towards 'western' values led to the addition of a further dimension of long-term/short-term orientation, also referred to as the Confucian dynamism dimension (Barthorpe *et al.* 2000) which was considered very important within East Asian societies. Trompenaars (1994) chose to focus on the dimensions of universalism/particularism, individualism/collectivism, affective/neutral relationships, specific/diffuse relationships and achievement/ascription, whilst Schein (1985) reported among others, dimensions of the nature of time, space, human relationships, human activities and human nature.

These have been developed in response to the need to undertake cross-cultural comparisons, and have been applied in both the national and organisational contexts. As demonstrated by the case of Hofstede, the weakness in the use of dimensions for assessing culture has been the fact that they tend to be value laden, but so far they appear to be the most realistic way of undertaking cross-cultural studies.

When dealing with a multitude of dimensions, typologies are employed as an alternative to provide a simplified means of assessing cultures. Typologies describe a number of ideal types of culture, each of them easy to imagine, against which the culture being assessed is compared (Hofstede, 2001). Typologies have mainly been utilised in studies of organisational culture. Notably, Handy (1993; 1995) identified the club, role, task and person typologies, and Quinn (1988) identified the market, hierarchy, adhocracy and clan typologies of culture.

These concepts could form the basis for studies into the phenomenon of culture.

CULTURE AND THE CONSTRUCTION INDUSTRY

Hofstede (2001) asserts that the study of culture requires the application of ethnomethodology, and this implies gaining insight and seeking understanding of social systems from inside and through the definition of the members of that system. This important principle in cultural studies implies that in seeking to study culture in the construction industry, a generic definition of culture alone is inadequate. It is necessary to see culture through the eyes of construction industry members.

A Construction Industry Definition

A useful piece of research undertaken by Abeysekera (2002) showed that within the construction industry, culture is considered to be about the “characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry, and the goals, values and strategies of the organisations they work in” (Abeysekera, 2002). In essence, culture in construction is about what is carried out, how and when it is done, who is involved and why things are done the way they are. These perceptions of culture as applied to construction are consistent with the earlier generic definitions in which culture is seen as “what people think, what they do, and the material products they produce” (Bodley, 1994).

The Impact on Construction

As demonstrated from the discussion so far, culture must be an important consideration for every organisation in every industry. In construction, this becomes more critical because of the nature of contracting, internationalisation of procurement, joint venturing, and the transfer and implementation of innovative philosophies and practices such as partnering, JIT management, Supply Chain Management and TQM from relatively more successful industries such as manufacturing and retail. As aptly stated by Hall (1999), the project-based arrangements that characterise the production of the built environment make the potential impact of culture even more pronounced than in any other industry.

A number of important contributions have been made about this potential. Maloney and Federle (1990) for instance pointed out that the culture of a construction organisation was a primary determinant of performance within that organisation. Low and Shi (2001) presented a study on cross-cultural working experience which showed *inter alia* that mismanaging cultural differences rendered otherwise successful managers and organisations ineffective and frustrated when working across cultures. They demonstrated that any organisation that wanted to manage a construction project successfully in another country had to understand the culture of the host country

clearly. It was also argued that culture had an influence on the choice of foreign parties in joint ventures (Ofori, 2000), and that there were difficulties associated with the implementation of such foreign philosophies as TQM in developing countries because of fundamental cultural differences (Ngowi, 2000). Their successful implementation usually required changes to the shared assumptions, frames of reference and understandings that most organisations had already developed. Cultural awareness is viewed as a potential source of competitive advantage (Jefferies *et al.*, 2002) especially in the face of increasing globalisation with many contractors working internationally. Hall (1999) also found that issues to do with culture could result in frustration of managers working overseas. The cases of Kumagai Gumi and the Bangkok Expressway extension project (Handley, 1997; Masaoka) and the rebuilding of the Croatian motorway from Zagreb to Split following years of war (Eaton Consulting Group Inc., 2002), also provide further evidence that besides institutional gaps, cultural gaps hamper the efficient execution of projects. To the extent that culture potentially wields such influence on the management and processes of construction, these findings show that it merits serious consideration. However, research into these issues within the construction research community has been very limited (Hall, 1999). Whilst some industries like food retail (Ogbonna and Harris, 2002), have had the benefit of industry-specific research drawing from the general principles and models espoused by culture researchers, quite a significant body of the existing literature on culture in construction is ‘anecdotal.’ Many of these anecdotal pieces of literature, together with renowned construction industry reports such as the Latham (1994) and Egan (1998) reports, have highlighted the most superficial and easily identifiable but negative aspects of culture within the construction industry, including aspects of antagonism, casual approaches to recruitment, machismo, and sexism. Together with the perceptions of construction work as dirty, dangerous, of low status and providing poor career prospects (Barthorpe *et al.*, 2000), this has fuelled the negative stereotyping of the culture of the construction industry. Unfortunately, not much has been shown by way of formalised research into culture to show what the culture of the industry is, to demonstrate that it goes beyond these stereotypes to include the nature of the product, the various processes involved in procuring it, those involved, and why the construction industry operates the way it does (Abeysekera, 2002), and to examine empirically, the extent to which it affects the output of the industry. As Barthorpe *et al.* (2000) suggested, this provides a fascinating field of study of the industry within the context of culture.

Research Focus

Despite the established need for research in this field, the state of research on culture in the construction industry is generally still at the pioneering stage as epitomised by the study of Serpell and Rodriguez (2002) which is described as the first systematic effort to find out the construction culture in Chile. The relatively limited research that exists, tends to be discursive.

The main focus of research into the role and impact of culture in construction is reported by Fellows and Seymour (2002) as being two-fold, namely:

- “National differences as they affect efforts to change industry practice in the country concerned or as they affect international collaboration; and
- Occupational and organizational differences, how they affect receptivity to new practices and technologies, and inter-firm collaboration.”

Other issues being considered, though to a lesser extent, include the linking of culture with power and the exploration of negative effects of cultural homogenisation, and methodologies associated with research in culture (Fellows and Seymour, 2002). Notable pieces of research undertaken within the construction domain include that of Maloney and Federle (1990) in which they sought “to define organisational culture, develop the means of measuring organisation culture, and validate the measurement technique for engineering and construction organisations.” Relying on the Quinn (1988) ‘Competing Values Framework’ (CVF), they found significant differences between engineering firms and contractors.

Serpell and Rodriguez (2002) also presented the findings of a research investigating the critical cultural elements of construction firms and the strategic action areas that could potentially influence these elements. Although the thoroughness of their data collection process improved the prospects of capturing the language and meanings of the organisation comprehensively, their findings were based only on one case study raising questions about the generalisability of these findings. Root (2002) applied Hofstede’s VSM to a range of occupations in a bid to raise awareness of the sensitivities and persuasions of the various participants of the construction industry and Rameezdeen and Gunarathna (2003) presented a similar research based on the CVF that sought to compare contractors and consultants. A similar study, this time based on a synthesis of frameworks, comparing contractors and architects was also undertaken by Ankrah and Langford (2004). These studies revealed significant differences in approaches to work between the participants considered.

A number of studies have also targeted specific aspects of culture. Nicolini (2002) for instance developed the concept of ‘project chemistry,’ and Lui (2002) explored ‘harmony’ within the context of construction projects. There have also been studies into such issues as prejudice and attitudes towards women (Dainty *et al.*, 2002; Duncan *et al.*, 2002; Loosemore, 2002). All the aforementioned researches have focused on organisational and occupational perspectives of culture and how potentially, they affect attitudes and approaches to work and relationships on projects. With regards to the influence of national culture on construction, Abu Bakar (1998) studied the extent to which ‘western’ and ‘eastern’ values have shaped the organisational culture and management practices of Malaysian contractors, and Hall (1999) looked at the challenges different cultures posed to expatriate staff working abroad and the training and support made available to them by their organisations. In this instance, the cultural dimension was found to be an important factor whose effects were indisputable but difficult to quantify, with firms typically adopting inadequate strategic approaches in dealing with this dimension. Ngowi (2000) also found that culture had a profound influence on the implementation of management philosophies and practices developed in other contexts and cultures, and Abeysekera (2002) developed a conceptual framework to aid understanding of the nature of culture in the international construction context, through literature surveys and interviews. These studies reviewed reflect the limited systematic research into the phenomenon of culture and its potential influence on the construction process. The areas covered so far suggests that scope for further work exists in culture research.

Implications for further research

The paucity of research on culture in construction (Hall, 1999), as shown in the discussion, implies a wide scope of possibilities for further research in this genre. Fundamentally, research needs to be undertaken to reveal the cultural orientation of construction organisations. Such studies must be on-going in view of the transient nature of culture (Svensson and Wood, 2003). This will throw light on some of the

subtle motivations that shape the behaviour of participants and the nature of the industry. Such studies will also make it possible to assess the changes in culture over time. As pointed out by Maloney and Federle (1990), such studies will make it possible to assess the success or otherwise of various interventions to change culture in construction organisations and occupations. Another potential benefit that could accrue to organisations would be the ability to develop strategies for organisational change with a higher probability of success (Serpell and Rodriguez, 2002). Research undertaken by Abukhder (2003) uncovered evidence which suggested that many small and medium-sized enterprises (SMEs) within the construction industry were “having notions such as ‘partnering’ and ‘best value’ imposed upon them, without necessarily having developed, within their own companies, the organisational culture or structures through which they might fully benefit from these principles.” On the basis of this observation, Abukhder proposed the fundamental question of “how the culture of an organisation can positively shape its profitability and competitiveness” on the premise that this will help in finding “ways in which SMEs can become involved in the new” Egan “culture, not only to suit their industry partners, but also to benefit the growth and development of their own organisations” (Abukhder, 2003). This fundamental question is not only relevant to SMEs but is also generally applicable to organisations across the spectrum, both within construction and in other industries. An appreciation of how culture, in whatever form, affects the competitiveness, profitability and performance of organisations within the industry will help with the process of implementing changes in culture and organisational structures. Since such research is generally lacking, as demonstrated by the review, studies exploring such relationships will undoubtedly be beneficial to the industry. Xiao and Proverbs (2003) pointed out that the overall performance improvement agenda of the construction industry requires improvements in products (right first time), the delivery (in terms of quality, cost and time), and the sustainable development of construction firms (profitability and competitiveness). To the extent that culture, as implied by the review, has a significant influence on all these elements and by extension the performance of construction organisations and the industry as a whole, it merits systematic research to explore the nature and extent of such influence.

CONCLUSION

The consensus of views, established through the review of culture, suggests that culture comprises the values and system of meanings peculiar to a group of people, that are learned and shared by all the individuals in the group through dealing with the basic problems of life and through their interaction with the contextual factors relating to the environment in which they live, and is expressed through artefacts, language, symbols, rituals and heroes. Culture therefore has the ability to shape the behaviour of individuals and groups of people as in organisations, industries and countries. This innate ability of culture to shape behaviour has particular relevance for the construction industry because of the industry’s peculiar nature of contracting, internationalisation of procurement, joint venturing, and requiring the cooperation of a myriad of participants. Unfortunately, for a long time, its importance has been understated and culture has been treated as the “black box” of the industry (Fellows and Seymour, 2002) with many of the inexplicable construction industry ills being attributed to it without much by way of formalised research into culture to show the extent of its impact. References made about its influence have been mainly anecdotal. Together with the successes of other industries which the construction industry has sought to emulate, the publication of landmark reports such as Latham (1994) and

Egan (1998), which made strong cases about the potential of culture to undermine performance, has raised awareness of the role of culture in construction and this is evident in the growing research interest and publications on culture and related issues. Current research has been focused on national differences as they affect industry practice and international collaboration, and occupational and organizational differences as they affect receptivity to new practices and inter-firm collaboration (Fellows and Seymour, 2002). However, there is still relatively a lot more to be done. As indicated by Tjihuis (2001), construction industry participants need to become more aware of the importance of this phenomenon and its manifestation and impact “on the process and product of construction business.” This awareness must be stimulated through further systematic research based on the adaptation and improvement of existing frameworks. Such systematic research will help significantly in the quest for performance improvement in the construction industry.

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