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Citation	The 32nd Annual Conference of the Association of Researchers in Construction Management (ARCOM 2016), Manchester, UK., 5-7 September 2016. In Conference Proceedings, 2016, v. 1, p. 425-434
Issued Date	2016
URL	http://hdl.handle.net/10722/235538
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GOVERNANCE UNITS AS INTERSTITIAL ORGANIZATIONS: THE ROLE OF GOVERNANCE ORGANIZATIONS IN THE DEVELOPMENT AND ESTABLISHMENT OF BUILDING ENVIRONMENTAL ASSESSMENT METHODS (BEAM)

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Green Building has been touted as the future of building construction. However, its emergence, due to the fluidity of the green building concept, is sometimes fraught with power struggles in the debate over which standards and practices to be adopted. With the emergence of Building Environmental Assessment Methods, much hope has been put on their associated third-party certification organizations to help forge a common ground for green building. These organizations are boundary spanning, traversing multiple professional jurisdictions, organizational fields, and involving various state and non-state actors. Despite wielding much influence in the development, establishment and promotion of BEAMs, the authority, and legitimacy of governance organizations are being questioned as to whose interest they serve, and whether they promote realistic green building practices. We argue that while the success of these governance organizations will be their ability to act as neutral ‘brokers’ of green building practices, they may end up capitulating the interest of powerful actors. Drawing on the theory fields proposed by Fligstein and McAdam (2012) and the concept of interstitial emergence, we explore the role of governance organizations for BEAMS in the building industry. The case is made that there is a need to examine the activities of governance organizations in the development of BEAMs, and why conceptualizing them as interstitial/boundary-spanning organizations could offer new insights and research directions in the burgeoning researching on BEAMs.

Keywords: Building Environmental Assessment Methods (BEAMs), field theory, green building, interstitial emergence

INTRODUCTION

Climate change has moved from the realm of science into policy. Since the establishment of the Intergovernmental Panel on Climate Change (IPCC), the subsequent negotiation of the first International environmental treaty (UNFCCC) during the Earth Summit in 1992 (Yergin, 2011) and the recent Conference of the Parties (COP21, 2015) in France, governments all over the world are now taking environmental issues seriously. This, amongst other things, is due to the growing concern about the depletion of the quality of the environment. The rise of

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Environmental Assessment Methods (BEAMs) or various other forms of environmental assessment schemes in the 1990s was, thus, an attempt by the industry to introduce measures for reducing the impact of building construction activities; or, at the very least, give shine to the fact that the industry was taking the issue seriously.

The establishment of these schemes have been championed by various stakeholder groups in the building industry. For example, Feige, *et al.*, (2011) describe the emergence of the 'Network for Sustainable Construction Switzerland', which is an organization designed to influence business and enhance their participation in sustainable construction in that country. A similar case is reported by Theaker and Cole (2001) in their study of how the private sector and public sector stakeholders came together to commission a consulting team to develop Green Building Design and Construction Guidelines for the City of Santa Monica, USA. In Hong Kong, the partnership between the Buildings Department and private sector consultants to develop the Comprehensive Environmental Performance Assessment Scheme (CEPAS), and the mobilization of various stakeholders by the Hong Kong Real Estate Developers Association to develop the Hong Kong BEAM can be viewed in the same light as those described by Feige, *et al.*, (2011) and Theaker and Cole (2001). These efforts by industry actors have led the establishment of various organizations to promote the adoption and implementation of BEAMs. The establishment of the HK-BEAM Society to promote the HK-BEAM, the US-Green Building Council to develop and implement the US-LEED and the Green Building Initiative (GBI) that owns and operate the Green Globes are examples of these organizations. These organizations, thus, represent efforts by stakeholders to engage with each other in providing a platform for consensus building around environmental issues related to buildings.

Despite the proliferation of assessment schemes championed by various stakeholder group in the building industry, most research work have focused largely on the technical aspect of these schemes, their strategic adoption by industry professionals, and their role in promoting sustainability in the building industry (e.g. Crawley and Aho, 1999; Cole, 2005; Cole, 2006). An area which has received little attention in the academic literature is how these schemes have been developed, and how they are institutionalized to promote their adoption in the building industry. Although some researchers have explored how assessment schemes have changed and influenced construction professionals and construction practices in the industry (e.g. Schweber, 2013; Schweber and Haroglu, 2014), this does little to further our understanding of the role of industry actors (stakeholders, professional organizations, industry consultants) in establishing assessment schemes, and how their actions contribute to the failure, or success, of implementing assessment schemes.

This paper draws on the concept of interstitial emergence (Morrill, 2006) and the theory of strategic action fields proposed by Fligstein and McAdam (2012) to provide a theoretical conceptualization of organizations that own and operate assessment schemes. We take as our point of departure the assumption that these organizations are boundary spanning, traversing multiple professional jurisdictions, organizational fields, and involving various state and non-state actors. Their actions are thus influenced by the interests and logics of operations of stakeholders. The paper begins with a brief account of the concept of green building and the development of building environmental assessment schemes. The focus here is on the workings of governance organizations and their role in the development of schemes. We then provide a theoretical explanation of how competing interests from the myriad of actors in the

industry influence the actions of governance organizations in the establishment and development of BEAMs. This section provides a theoretical portrait of how the power struggle that shrouds the development of these schemes explains how some groups can succeed in controlling the activities of governance organizations, and thus influencing the content of BEAMs. The paper concludes by making a case for the need to examine the activities of governance organizations in the development of BEAMs, and why conceptualizing them as interstitial/boundary-spanning organizations could offer insights in their role as developers of BEAMs and as facilitators of green building.

Emergence of Assessment Schemes for Green Building

Following the publication of the Brundtland Commission's report 'Our Common Future' (WCED, 1987), and the subsequent emergence of the concept of sustainability, various reports have been produced to explore the impact of construction activities on the natural environment. These reports and various other studies have highlighted the extent to which activities in the industry contribute significantly to environmental problems ranging from excessive consumption of global resources to the pollution of the environment (see Ding, 2008, Cheng and Venkataraman, 2013). Although most of the issues highlighted in these reports have existed since the era of the industrial revolution (Shrivastava and Hart, 1994), it is the emergence of sustainable development in the 1990s and the subsequent revelation of the building industry's contribution to the problem of climate change that has triggered concerns about what the building industry is doing to alleviate the negative impact of its activities on the environment. With increasing expectation on the industry for greater environmental responsibility (Cole, 1999), the industry had to develop approaches and practices that address these environmental concerns and adhere to the emerging principles of sustainability. The concept "Green Building" emerged in the 1990s as various industry actors - specialists, practitioners, researchers, and myriad professions, organizations, institutions, and communities - started to look for ways to decrease the impact of the building industry's operations on the environment (Cole, 1998).

Yet, the adoption of green building principles is sometimes fraught with a number of challenges. Green building practices are sometimes at odds with conventional building construction, and extant building codes and standards. The integration of these new practices in already existing project delivery processes and the need for new skills also hampers the transition to green building (Cole, 1998). Considering the vast range of environmental criteria that are relevant to buildings, the development of schemes provides a means for designers and builders to identify specific environmental criteria based on the demand of clients and to provide a guideline for design and construction. These schemes have evolved out of the need for a holistic comprehensive procedure to identify and ascertain the environmental impact of building construction (Ball, 2002; Ding, 2008). Their development, therefore, serves to provide a way of structuring environmental information, and offer a means for industry actors to objectively assess the environmental performance of buildings, and to measure the building industry's progress towards sustainability (Ding, 2008). By laying down the fundamental direction for industry actors to adopt green building practices, their use is aimed at enhancing the overall environmental awareness in the industry.

While the major challenge in the development of any particular BEAM is the codification of the numerous environmental criteria relevant to building, deciding on

which practice is green and which one is not is not a trivial task. The emergence of terms such as “sustainable building”, “High-performance building”, “smart building”, “environmentally friendly building”, which have all become synonymous with the concept of green building (Henn *et al.*, 2013) shows that industry actors may have varied interpretation of what green building should accomplish or the goal of green building. With such variability in the concept, codifying green building practices is bound to be fraught with struggles over how to frame the concept in assessment schemes.

Thus, during the development of BEAMs, there is the tendency for some actors to adopt strategies aimed at promoting certain practices that will advance their interest. Industry professionals, for example, will want to appropriate new knowledge and practices for their own benefits (Bresnen, 2013). Furthermore, some actors may want to influence the content of assessment schemes in order to advance their own interests. The success of varying interest groups to decide on the content of assessment schemes may, therefore, raise questions about the authority and credibility of developers and owners of these schemes. In the UK, for example, increasing rejection of assessment criteria in BEAMs as authentic measures for green building has been reported (See Schweber, 2013; 2014). Professional actors have criticized particular credits or categories for not adequately capturing the green building concept. The major challenge in the development of schemes is, thus, the operationalization of the green building concept to resonate with the industry’s myriad actors (*ibid.*).

The development of BEAMs in the building industry

The first assessment scheme, the Building Research Establishment Environmental Assessment Method (BREEAM), was established by the UK Building Research Establishment in 1990. Since its establishment, numerous assessment schemes have been developed for the construction sector. The most prominent amongst these being the US Leadership in Energy and Environmental Design (LEED), which was established in 1998 by the US Green Building Council. Since the establishment of these two schemes, there has been a rapid growth in the number of Building Environmental Assessment Schemes around the world.

BEAMs employ a set of environmental criteria against which green building performances are checked and evaluated. Most schemes are constantly updated and extended to meet changing market demands and environmental expectations. The UK-BREEAM, for example, has been constantly updated since its emergence to include assessment of such buildings as existing offices, supermarkets, new homes and light industrial buildings. In Hong Kong, the HK-BEAM has undergone several transformations since the introduction of the first scheme in 1996. The first scheme covered new and existing air-conditioned office buildings and was released in 1996. Later in 1998, the Hong Kong Housing Authority joined the HK-BEAM Steering Committee and supported the introduction of HK-BEAM assessments for high-rise residential developments. This led to the development of a new version of the assessment scheme in 1998. A third version of the assessment scheme was released in 2003 to cover both existing and new buildings (HK-BEAM Society, 2014).

Moreover, for each new version that is released, the scope of the assessment scheme is usually broadened to address new and current sustainability issues (Cole, 2006). For example, in response to the December 2009 Copenhagen Conference on climate change, when climate change and global warming became an international issue and several world leaders called for radical action to be taken, HK-BEAM Society

decided to introduce a new version of the assessment scheme - HKBEAM-Plus Version 1.1 ((BEAM Society, 2010). This version was introduced in April 2010 to meet the higher expectation from the public. In response to the conference outputs, this version of the scheme placed more emphasis on the importance of greenhouse gas emission reductions. Further, it incorporated a number of mandatory features that aligned with prevailing industry standards and regulations.

The major challenge in developing and updating these schemes is, however, how to categorize and rate the various environmental issues relevant to buildings, and which industry experts, or actors, should be involved their development. In most cases, various technical committees, advisory groups, industry experts, and consultants are engaged in developing new and updated versions. These actors decide on how to operationalize the green building concept to meet specific environmental objectives. Indicators are used to structure these environmental objectives. These Indicators define the terms by which the performance of a particular development project and progress toward environmental objectives would be measured. Indicators in assessment schemes are structured to allow ease of measurement of environmental performance, and they are intended to provide designers and developers and other users with a common way to set targets for project performance. Recommended practices and weightages are assigned to various indicators to provide guidance for industry professionals.

While the decision as to which indicators to prioritize, or weightage to use, is usually decided by actors in charge of updating and developing BEAMs (see Theaker, and Cole, 2001), these actors may represent various interest groups who may advance practices that serve specific interests and/or promote practices influenced by their own unique ideologies. The content of assessment schemes can, therefore, be skewed in favour of some actors who may not truly represent the interest of all actors in the building industry. There is always the likelihood of powerful actors, who might not necessarily be experts, to want to influence the content of scheme by engaging in various actions aimed at advancing their interests.

The Role of Governance organizations in the development of schemes

Organizations that own and operate BEAMs, for example, the UK Building Research Establishment's BRE Global which owns the BREEAM, the US Green Building Council (USGBC) which owns the US-LEED scheme, and the Hong Kong BEAM Society which owns the HK-BEAM, are responsible for the maintenance and continuous improvement of these schemes. These organizations also organize educational programmes, provide professional accreditation, third-party certification of projects and promotion of their use. The credibility of these organizations is critical in terms of the credibility of the scheme (Cole and Jose Valdebenito, 2013). Since they are viewed as neutral "brokers" of green building practices, their presence, to some extent, influences the uptake of the assessment scheme. Aside from developing and maintaining the assessment scheme, they engage in a number of activities such as marketing and advertising the adoption of the scheme. These activities influence the awareness of the assessment scheme, either domestically or internationally. As the assessment scheme is affiliated with these organizations, the legitimacy of these organizations determines the human and financial resources available to maintain and implement the scheme.

While majority of these organizations are private sector bodies, increasing adoption of assessment schemes as policy instruments (Schweber, 2014), and the involvement of

some state agencies in the development of schemes (for example, the case of Hong Kong Housing Authority as stated above), presents a situation whereby both states and industry actors are heavily involved in the creation and amendment of assessment schemes. This has led to a growth in what some have labelled as "mixed" regimes of a hybrid nature (e.g. Clapp, 1998), where both private sector actors and public sector actors equally influence the creating and implantation of BEAMs. Thus, aside from managing the interests of the multitude of stakeholder groups in the private sector in the framing and development of assessment, these organizations also need to manage the influence of public sector actors.

What this means is that developers of assessment schemes have to constantly engage with various actors and mobilize support for the practices they are trying to propagate. They have to engage with different actors from time to time and forge alliances (Jaradat, *et al.*, 2013) with both private and public sector actors to promote assessment schemes.

The theory of Strategic action fields

This paper adopts Fligstein and McAdam's (2012) conceptualization of fields to make the argument of the role of governance organizations in the development of assessment schemes. Through this lens, the building industry can be viewed as a social space where various industry actors take each other's actions into consideration in their daily activities, and through this process bring a new field into existence. Within this social space are various fields, with each field comprising aggregates of organizations/professionals/actors providing similar services, their constituencies, and their relevant professional bodies (DiMaggio and Powell 1983). These fields exist together with numerous other fields and are nested within each other in a broader institutional context. Industry actors operate in various fields, interacting with each other on the basis of shared (but not consensual) understanding about what is at stake in the industry (in this case green building). Actors also engage with each other with a shared understanding of the rules governing legitimate actions in the field vis-à-vis green building.

Fields are composed of two distinct antagonistic groups of actors, namely incumbents and challenges. Incumbents are those actors who, at any point in time, wield greater influence within the field and whose interest and views are usually reflected in how the field is organized. The purpose and dominant ideas of the field are shaped in their interest. The rules in the field also tend to favour them and shared meanings tend to legitimize and support their position in the field. The challengers are those actors with less influence in the field and they occupy a lesser position. While they recognize the dominant influence of incumbents on the shared meanings of the field, and may usually conform to the prevailing order of the field, they can propose new shared meanings that will enhance their own positions. The theory recognizes the presence and influence of state actors who usually have formal authority to intervene in, set rules for, and legitimize the position of, non-state fields. These state actors form their own unique fields.

In addition to incumbents and challengers, SAF theory also proposes the presence of governance units in fields. These units are established in the field to oversee compliance with the rules in the field, and assist with the overall functioning of the field. They "are internal to the field and distinct from external state structures that hold jurisdiction over all, or some aspect of, the field" (Fligstein and McAdam, 2011 pp. 8). Examples of these governance units are industry trade associations and

certification boards or organizations; and in the case of this study, Green Building Councils, and various BEAM certification organizations established to oversee the adoption and implementation of assessment methods. Governance units usually bear the imprints of the most powerful actors in the field and the logics that are used to justify that dominance. The governance units are therefore there to reinforce the dominant logic and protect the interest of incumbent actors.

For example, in Hong Kong, HK-BEAM is the dominant assessment scheme. The scheme has its own governance unit, i.e. HK-BEAM Society, which owns and operates the scheme. This governance unit oversees the adoption of green building practices. HK-BEAM Society is embedded in a complex web of fields made up of myriad actors who have interests in green building: financiers, suppliers, customers, industry associations, and state regulators. Actors in each of these fields will, from time to time, behave strategically to change existing logics in with regards to green building. They will do so by introducing new logics and practices. During episodes of change triggered by changes in government policies, international laws or other external shocks, actors in various fields may act strategically by promoting practices which advance their interest in the industry. If new versions of schemes are to be developed during these episodes of change, actors may behave strategically to incorporate these practices in assessment schemes, and thus make these practices standard industry guidelines. In such nested fields, consisting of actors with varied interest, the argument that governance organizations can behave as, neutral 'brokers' of BEAMs is questionable.

Governance at the interstices of multiple organizational fields

The theoretical concept of interstitial emergence as proposed by Morrill (2006) is adopted to explain how a field for green building certification has emerged in the building industry and the actions of governance units in charge of certification schemes; i.e. BEAMs. The concept posits that firms, organizations, and industry professional are simultaneously members of multiple overlapping organizational fields. In this sense, the emergence of an issue of common interest to actors belonging to these nested fields leads to the emergence of interstices between fields (Rao *et al.*, 2000). What this means is that actors, instead of addressing the issue at stake in their own field by introducing a new logic and practices in their field, will act by creating a peripheral field at the overlap of their various fields. These interstitial spaces are populated by groups of actors with a common interest in the issue at stake, and will develop frames to codify practices. Thus, if we take the emergence green buildings as an issue that is of importance to various actors in the industry, it can be argued that, as actors with common interest in addressing environmental concerns have engaged with each other to develop schemes, various fields for green building certification has emerged in the building industry replete with new practices, norms, and values. Since actors may still be part of their individual fields in which they have been historically institutionalized, there is the challenge of managing conflicting logics between the newly emerging field and the actors own field.

Organizations established in these interstitial spaces to manage schemes and provide certification for green buildings, therefore, has the responsibility of managing the emerging new practices and norms. Situated at the boundary of multiple organizational fields - the state, industry and various organizational fields, Bátora (2013) notes that these organizations are inundated with different and sometimes conflicting organizational logics, principles, and ideologies, and has to manage and

synthesize different and sometimes conflicting logics of operation. Moreover, since logics and practices emerging in the interstitial space may conflict with those of actors in their respective fields, these organizations need to develop and deploy various strategies in order to successfully promote the adoption of practices. They should ensure that schemes used to promote practices resonate with the normative and cultural-cognitive aspects of actors (See Schweber, 2014; Rao *et al.*, 2000).

DISCUSSION AND CONCLUSIONS

Following from the above argument, research on BEAMs should consider the organizational and institutional context in which there are developed and used. Assessment schemes should be seen as documents, whose development subsists in an environment of power struggles, behind which there could be various regulating, controlling and/or commercial interests. We have noted that the development of BEAMs involve the participation of various working groups and technical committees who decide on the content of these schemes. These working groups or committees include various actors, experts, and professionals operating in different professional jurisdictions or fields. Various groups of actors, thus, influence the formation and codification of practices in assessment schemes. Through their background and organizational affiliations, these actors may have varying views on what is 'good' green building practice. Due to the varying interest of these actors, and the fluidity of the green building concept, the development, and establishment of assessment schemes in the industry can be fraught with powerful struggles over the meaning of 'green building' and which practices qualify as realistic and pragmatic green building practice. Thus, the field in which a particular assessment schemes has emerged to can be seen as an arena where many organizations - companies, trade associations, governmental and professional organizations - participate and act to advance their interest; all in a complex interplay of struggle over what is green and what is not.

From this argument, there are various interesting research questions that could be asked about the institutional context of assessment scheme: How established organizations, for example, the Hong Kong BEAM Society, the UK Building Research Establishment (BRE) and the US-Green Building Council (US-GBC), work in formulating and publishing green building standards for the whole industry. How can these organizations assure actors of the authenticity of practices, and encourage actors to adopt these schemes? How are the practices codified in schemes and the process of arriving at these practices justified? Who takes part in the development of schemes and how do they decide on which actors to involve? And finally, how do these organizations maintain authority and ensure continuous adoption of schemes. Exploring these questions will offer insights into the actions of governance organization that undermines their reported credibility and authority in the building industry. This will further contribute to the burgeoning research aimed at addressing legitimacy concerns of assessment schemes in the building industry.

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