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Differentiated Power Perceptions in Construction Projects – Thai Case Studies

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DIFFERENTIATED POWER PERCEPTIONS IN CONSTRUCTION PROJECTS – THAI CASE STUDIES

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ABSTRACT

Through a lens of power as discourse and using a deconstruction of those discourses, the research identifies the differential perceptions of power and associated roles of the various stakeholders in Thai construction industry projects and how these perceptions of power affected decisions made, and project progress, in three case studies. This research applied an interpretivist approach by means of interpretation of actions and meanings of studied actors (stakeholders in Thai AEC industry case studies) according to their own subjective frame of reference by using multiple case studies as a means of research methods. The interview questions were focused on power relations between all stakeholders in construction processes in each case study. Results showed that there are differentiated perceptions of power which alter dynamically across the three Thai construction projects creating a complex environment of decision-making within each project. Thai construction stakeholders have different perception of power and associated roles in construction projects. A downstream stakeholder such as contractors, sub-contractors and suppliers have perception that client (owner of the projects) has power to control everything in the project. While upstream stakeholders think that designer and consultant has more power to control the project. The subsequent decisions made are based on the varied perceptions of power during the construction projects and each has an impact on the design of buildings. The sustainability and innovation aspects in the project designs often are neglected by decisions made based on financial aspects where power is concentrated with non-technical stakeholders. The perception of power that each stakeholder perceives are different, often ending with conflict in the construction projects resulting in increases in project time, stage delays, poor working relationships, increased costs and sometimes poor delivery outcomes.

KEYWORDS: power discourse, power relationships in construction projects

INTRODUCTION

This paper extends previous research into the role and effects of power in construction projects by (Cashmore et al. 2014; Pinto 2000; Sage & Dainty 2012) who show that stakeholder's power and the relationship among stakeholders affects construction projects, albeit in an overall perspective but without the power relationships being deconstructed and differentiated. The construction industry is one of the industries where innovative technologies and construction methods and designs have been or can be transferred from research to the real world application. These research and technologies include sustainable building designs, high efficiency material, effective construction process, Off-Site and Lean construction. These options have different attributes that contribute to a construction projects which include resource, time, cost, performance, quality, and public interest (Bourne & Walker 2005; Cicmil et al. 2009; De Marco 2011; Siddall et al. 2013). Different stakeholders introduce different attributes to the construction project based on their roles, responsibilities, knowledge and business agendas.

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Sometimes information about these attributes are available in a different time period during the construction project. This is because some sets of information can be made available only when previous sets of information are available. For example, in any construction project a quantity surveyor will be able to estimate cost of the construction process when construction method has been determined. This also means that building design also has been done up to a certain level if not completed meaning that the decision making process also has to be dynamic aligned with the stream of information available at that time (Clegg 1992). Decisions have to be derived from relevant elite stakeholders who are involved in construction projects (Harquail & King 2010; Love et al. 2014; Sage et al. 2010). Previous research has identified that decision making processes in project management are related to and affected substantially by stakeholder's power (Cashmore et al. 2014; Pinto 2000; Sage et al. 2012) and the relationship among stakeholders (Cicmil et al. 2006). The coherence among stakeholders and the way that they influence each other also has an impact on how decisions have been made in construction projects (Chou & Ongkowijoyo 2014; O Oliomogbe & J Smith 2013). This research identifies the differential perceptions of power and associated roles of the various stakeholders in Thai construction industry projects and how these perceptions of power affected decisions made, and project progress, in three case studies of construction projects.

RESEARCH CONTEXT

Power in a human sense is often defined simply as the ability to influence others, or specifically to alter the 'rights' of others, often without consent (Hohfeld 1917) or influence the outcome of the project (Austen et al. 2008). Boulding (1990) mentioned that without human valuation and human decision the term 'power' is a concept without meaning. The other type of power so-called "power of appointment" or "power of attorney" referred to the specific 'rights' that have been created "in the person to whom the power is given rights in rem of proprietary character" (Hohfeld 1917, p. 727). Power has also been used as a medium to enable or constrain particular pattern of actions (Marshall 2006). To Tarnow (2000) this impact is strengthened by the impact of operating in a group. Clegg (1989) argues that the production and organizing of power has three element forms: being episodic, dispositional, and facilitative. The episodic represents the irregular but operational exercise of power as stakeholders in social contexts deal with communication, conflict, their feelings and resistance or contestation in their interrelations. This view directly reflects what happens in most construction project organizations where stakeholders engage their actions in ongoing manner by using available information, material, techniques and strategies to negotiate their way through different encounter and different time frame along the project (Marshall 2006). The dispositional is a socially constructed element that informs relationship and allocates legitimate authority. The facilitative is grounded in the social context of a situation, sometimes in positional structures, in the design of tasks, and in socially formed networks of people and institutions. These three elements, Clegg argues, are channels for empowerment or disempowerment. Toffler et al. (1981) add that power can simply be knowledge.

Sage and Dainty (2012) studied 'power" in project based organization setting. They focused on micro level through a non-verbal or non-language character. The study showed that there is power embodied in the actions such as loud-speaking over junior team member, tones of speaking voice, pausing for thought or hesitant gesture from junior members. Then decisions were made through the actor who is higher in an organization's hierarchy as the mentioned

actions have been used as a tool to show domination during the decision making process. This aspect of power is embedded in the organizational hierarchy and has been conveyed through non-language actions (Sage & Dainty 2012).

Cashmore et al. (2014) studied the power dynamics of environmental policy and international development through multi-theoretic frameworks. These include Foucault's Governmentality perspective and Clegg's three circuits of power framework. Their research showed that by adopted mentioned multi-theoretic approach was enabled them to see power in a different way and scales, from everyday practice to governing system. The relational of power within and between organizations from Clegg's framework provided important extensions to the governmentality analysis (Cashmore et al. 2014). However, Mitev argues for 'the inclusion of broader social, economic, political, cultural and historical factors' (Mitev 2001, p. 84). By taking this approach, we can enable a better understanding of the power and politics involved construction projects, by focusing on social issues, interrelationships and social structures.

Rather than take the social aspect of power relations in construction projects at face value, we need to understand and perform research that recognizes the complexity and historical construction of the members of the implementation team and process (Mitev 2001). We currently cannot describe or explain the political environment in systems implementation because politics in implementation endures influence, pressure, dogma, expediency, conflict compromise, intransigence, resistance, error, opposition and pragmatism (Ball 1990). That is, the implementation process is complex, messy, inconsistent, ambiguous and contains dilemmas (Corbitt 2000). As a result, we can ask about that complexity, ambiguity and messiness because they related to the social realities imposed in organizations and these realities are essentially informed by power and politics

By using such a critical path in research, we can expose better understanding of the processes in construction management by providing rich descriptions about human behaviour, specifically about the power and politics involved. Critical studies expose political agendas, power coalitions, and discourse. However, they offer no solutions but rather identify what is happening to raise the consciousness of others (Peszynski & Corbitt 2006).

The concept of power relations, as proposed by Foucault (1977, 1978, 1980), has been utilised in order to identify the dynamic nature of human relations through the influence of power and politics. Foucault (1978) argued that power is a dynamic set of relationships constantly changing from one point in time to the next. It is this recognition that is lacking from most studies in project analysis in construction management. Furthermore, these power relations are created through the use of discourse. Discourse represents meaning and social relationships, forming both subjectivity and power relations. Discourses are also the practices of talk, text and argument that continuously form that which actors speak. Rather than view power as episodic and structuralist, as the traditional view of power is, Foucault theorised a post-structuralist view of power. This post-structural view of power as both an obvious and hidden concept provided the researcher with a lens through which the nature of the power relationships were perceived by others and interpreted by the researcher.

Power is here seen as constructed in social contexts and manifests its influence in all social contexts (Corbitt 2000; Corbitt & Thanasankit 2002; Nguyen et al. 2006; Peszynski et al. 2006). Construction projects are social contexts where power is constructed and social relations emerge based on that constructed power. These relationships are grounded in elements of domain knowledge (Kanjanabootra et al. 2013) and in spheres of influence in construction projects. These spheres of influence relate to the various stakeholders: ownership, investors, architects

builders, designers, engineers etc. As the stakeholders interact in the context of a construction project their degrees of influence change throughout the construction process. However, contestation is also normal in power contexts. Contests over control and influence are normal and often result in either disruption in the social environment, or negotiation and compromise, or inform the development of new power relations through an iterative process, which keeps the social context dynamic (Corbitt 2000).

In this research the stories of power relations in the three Thai construction projects are interpreted through this lens of changing power relations and the context of influence expressed as discourse. This is set within the context of Stakeholder theory, which posits the interaction between stakeholders within the project and the impacts that this interaction has to the outcome of the projects as well as stakeholders themselves (Freeman 1984). As this research, the data has been retrospectively collected from the past construction projects, the research focuses on the 'normative' basis of the stakeholder theory which some assumptions were made. These assumptions included, "(a) stakeholders are persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity. Stakeholders are identified by their interests in the corporation, whether the corporation has any corresponding functional interest in them. (b) The interests of all stakeholders are of intrinsic value. That is, each group of stakeholders merits consideration for its own sake and not merely because of its ability to further the interests of some other group, such as the shareowners." (Donaldson & Preston 1995, p. 67). Therefore, impacts that were subsequently of their action will not be judged. Stakeholders in this research included clients (owners), project managers, engineers, designers, architects, contractors and suppliers. From these facets, this research used stakeholder theory to examine the interaction among stakeholders in three case studies construction projects, grounded in a view that power relations in social contexts like a construction project are constructed in that context but are informed by discourse that reflects the relative power of each stakeholder involved.

RESEARCH DESIGN

This research applied an interpretivist approach to analyse collected data. Interpretivist method refers to "evidence gathering techniques that are focused on the intention and subjective meaning contained in social actions" (Gerring 2007, pp. 69-70). Interpretivism is a research paradigm that supports the importance of understanding human behavior. The emphasis is on the comprehension of human action (reality) and knowledge that embedded in a social construction rather than the forces which shaped that action (Dainty 2008; Hanisch 2009). This interaction also included language, gesture and expression (Goulding 1998). Interpretivist research assumes that there is a 'difference between the object of natural science and people in that phenomena have different subjective meaning for the actors studied' (Dainty 2008, p. 3).

The approach accepts that 'human behaviour is mediated by meaning and seeks to identify types of process and their expression in particular context' (Schweber et al. 2012, p. 484). Therefore, this paper takes an interpretivist approach by means of interpretation of actions and meanings of studied actors who are practitioners in Thai AEC industry according to their own subjective frame of reference (Williams 2000) by using multiple case studies as a means of research methods. The Thai construction practitioners in this research included, clients (owners), architects, engineers, project managers, contractors and suppliers.

Case study research has been defined as a way to 'investigate contemporary phenomena within its real-life context, especially when the boundaries between phenomena and context are

not clear evident' (Yin 1994, p. 13). Case studies are also relevant techniques to use to study social phenomena in a single setting to help researchers answer "how" and "why" questions of social situations that involve behavior through descriptive or exploratory research (Stake 1985). Case study also provided insights and ideas of specific phenomena such as what happened during the construction projects (Fellows & Liu 2008). The interview questions were focused on power relations between all stakeholders in construction processes in each case study. The semi-structured questions have been used to ask stakeholders in a practice-based approach (scenarios) where perception of the word 'power' which each stakeholder perceive. This 'power' in stakeholder interaction embedded organizational practice in case study projects. It can be expressed in both positive (successful execution) and negative (dispute) manners (Sage et al. 2012). In this research the aim was to uncover changing power relationships to ascertain what was happening in the projects and therefore how the relationships were emerging. To this extent the interviewer asked respondents about the nature of who had control in the project and how this changed during the process. Each of the projects had all finished. Two of the projects were a hotel and 2 were shopping malls. This became a key issue in the uncovering of the dynamics of the power processes and changes in the projects. Whilst it would ideal to follow a project through to uncovered these power relations and their dynamics, in these cases it was reflective analysis on what had happened, in the context of each interviewees perceptions of theirs and others power and the relationships on the social communities of each construction project. .

Case studies details

This research used semi-structured interview as a data collecting method. The interviews were conducted with 18 practitioners in Thai AEC industry from three case studies of large-scale construction projects in Bangkok. The rationale behind the case study selection is that the characteristics of case study project A (large scale retail building) is different from case study B and C (residential building). These include the building users, number of stakeholders involved and business types. The data were collected from key stakeholders in each construction project. The interview with each stakeholder last between 30 to 45 minutes. Detail is shown in Table 1.

Table 1: Case project characteristics and participants

Case study	Description	Research participants from case study
Case Study Project A commencement date 2012	• The project is a large scale retails business. • The project has been developed by owner who local retails developer and management • The architectural conceptual design has been design by international architect firm • The project used international design engineering firm. • The project used international contractor company. • The project used design-bid-build contract.	1 Owner 1 Engineer 1 Contractor 1 Supplier
Case study Project B commencement date 2011	• Project A is a high-rise hotel construction project located in Bangkok. • The project application is hotel and service apartment in one building. • The project has been developed by owner who is an international properties developers company. • The architectural conceptual design has been design by	1 Owner 1 Project manager 1 Architect 1 Engineer 1 Contractor 1 Supplier

	international architecture firm and used local architecture firm to carry out detail design. • The project used international design engineering firm. • The project used international contractor company. • The project used design-bid-build contract.	
Case study Project C commencement date 2010	• Project B is a multiple buildings hotel construction project located in Bangkok. • The project application is hotel and service apartment in separated buildings. • The project has been developed by owner who is a local properties developers company. • The architectural conceptual design has been design by international architecture firm. • The project used international design engineering firm. • The project used local contractor company. • The project used design-bid-build contract.	1 Owner 1 Project manager 1 Architect 1 Hotel operator 1 Engineer 2 Contractors 1 Supplier

CASE STUDY DATA ANALYSIS

The information about the perception of power in Thai AEC industry has been utilized through qualitative un-structured interviews, conducted as conversations between the interviewees and the researcher who had industry experience and domain knowledge. A small number of set questions were used as stimuli, but the conversations were allowed to flow according to the emergent stories. This was important as the data being sought, about 'power relationships', was about their perceptions of how it was constructed and how it changed over time. Since there were a number of stakeholders involved in each case study this was necessary to identify the differing perceptions of who was in change, who had power and how it changed. The interview/conversation notes and transcripts were then processed and coded with NVivo computer qualitative data analysis software (Richards 1999). The ability of NVivo as an analysis tool is in its bringing together strands of data, observations or comments enabling the analysis, the mapping out the concepts (nodes) involved and establishing the relationships between them (Bazeley & Jackson 2013). The software used tagging theoretical and empirical studies labels with interview notes and transcript texts and categorizing text into defined themes. The data analysis has been done with an abductive (iterative) analysis. The first case study data analysis help researcher find emerged theme and refine the semi-structured interview questions for latter interviews. The result is the emerged themes which reflected how stakeholders perceived 'power' in construction project context and making sense of these perceptions that informed by literature (Hassan Ibrahim 2013).

The analysis using NVivo utilized various nodes, each informing the researcher about perceptions of power and power relationships. The search was not about referencing of the word 'power' *per se*. rather it was a search for relationships and perceptions about who had control and at what stage. This in essence is demonstrative of interpretivism as the researcher interprets words like 'control', 'forcing', 'allow' are representative of these power relationships form scenarios embedded in the stories told by the participants. Some examples of the nodes created in NVivo and the key words and phrases that were identified in the texts of the interviews/conversations with participants, reflective of 'power' or 'power relations' are shown in Table 2.

Table 2: Data Analysis Nodes

Nodes	Example of words and phrases coded in node
• Control by Owners • Control by Architects • Control by Project Manager • Control by Engineers • Control by Contractors • Control by Suppliers • Control by Financial (Money)	But that's all we can do because owner *"has more power"* to make decision. / We are *"unwillingly"* keeping it in our stock and hope that it can be modified and use in other projects / Owner *"allows"* tenants to do things different from design criteria otherwise they will not rent the space. / Owner also "*have been pressed"* by bank or sometime shareholders in case of public company
• Control changing from issue to issue • Control changing from stage to stage (Procurement)	But because the design *"keep changing"* all the time, we *"have to follow"* them / I'm talking about who give "*most benefit on that specific issue"* back to me the most *"I choose to trust"* that person and make decision based on that.
• Control by Standard, Law, Regulation and Characteristics of the project	Not really most of the time is technical aspects and *"then"* money. / Our technical requirements are*" more important"* than theirs. /

These nodes were used to reflect on the nature of the social relationships that existed in each project and provided the basis for the researcher to interpret the texts to see how power was perceived and how it was reflected in each projects' operations. These reflections formed the basis of the findings in the research.

RESEARCH FINDINGS

1. Thai construction stakeholders have different perceptions of both their power and associated roles in construction projects.

The individual stakeholders often perceived that other stakeholders have more power to control the projects than they do. For example downstream stakeholders such as contractors, sub-contractors and suppliers have perceptions that the client (owner of the projects), architects and consultants have power to control everything in the projects. While upstream stakeholders such as Owners think that designers and consultants have more power to control the projects. In their views these different perceptions of power has different impacts on construction projects. For instance, some stakeholders think that architects have power to control what actually happens in construction projects and how designs are modified to work. One Engineer from case study C said:

"I think it is the architect who has power to control the project, because I think M&E work is the end of the line. How the building looks and functions have already been set up before you start your process. So in my job the power to control things is with the Architect. I have to fit all of our system (M&E provision) into their building design (allocated space). Most of the time my work conflict is against the architect not the owner. We never force them (architect) to change their design. But they don't understand the nature of engineering systems, we need space to accommodate the system which is just given to us. We just try to be as flexible as we can be to design the system for their building, but it seems like to ask for more space is such a difficult task. Many times they ask me to reduce the M&E provision spaces because they want to increase other space."

The impact of this was that the Engineer had to redesign the M&E provisions. The socially constituted nature of power here was one where relationships were hierarchical and one stakeholder appeared to be subservient to another. Power was constructed by the Architect and followed by the Engineer. The social relationships inherent in the project determined the nature of power in the project. In the same case study C, one stakeholder disclosed a situation where the social relationships became discursive and complementary based on social action and mutual beliefs in a certain philosophy. One of the Suppliers mentioned*:*

"I think that in the overall picture the architect has most power to control the project. Some senior architects can convince owners to follow their comments. I have seen in one project (not this case study C), the owner is a famous Chinese businessman who has quite a strong personality. However, the project architect, who believes in Feng Shui (the Chinese art of placement), had a long conversation with this owner and managed to convince him to change a major part of the building design to align with Feng Shui and thus his design."

In another Case Study (B), sets of relationships were identified that enabled those with domain knowledge to take responsibility for their areas of expertise. One of the Architects said about this set of relationships:

"I think it varies from project to project. Who has power to control project depends on that particular project organizational structure. For instance, in this project the owner has boundaries. They let team members have power to control issues based on their roles and responsibilities, including how the building looks, but the architect has ultimate control on that; while with technical stuff it has to be the engineers.

These three examples highlight firstly that 'power' in these projects results from a web of relationships that serve to discipline people by a command process which determines what can and cannot be said and who can and cannot make decisions, and secondly, what to some if 'obvious' and to others as 'hidden'. A lack of understanding of or an inability to see the 'hidden' forms voids which determine what can be and what is said, discourse, in a construction project. This non-identification of the 'hidden' can lead to negative impacts on the work of other stakeholders. For example, some architects are concerned only with visual aspects of the construction project and often use this as their discourse to control the project and the other stakeholders involved. The impact that it has on the project is that some technical or engineering aspects such as performance of the building have to be compromised because of the continual

discourse about the "visual aspects of the building". Owners involved in both case studies B and C mentioned that using international architecture firms with famous architects in the project can give both positive and negative impacts to the construction project. As their expertise is to design "how the building should look" and everyone respects the architect's role and responsibility in that design. However, sometimes these famous architects are not happy if other stakeholders (even an owner) ask them to change or revise their designs for any reason. Therefore, it becomes a little harder for everyone else to work in the project. The discourse of 'design' in the three Thai case studies became paramount and determined the roles and functioning of the other stakeholders and often became the focus of conflict between stakeholders as the necessities of functionality challenged the dominance of the design discourse with a discourse of 'making it actually work". There was in effect a web of relationships where the stakeholders collectively determined the levels of control of each. In addition there was evidence of that discourse of design being challenged by a perceived superior discourse of ownership, often too challenging the relationship between owner and architect.

In some cases it was simply depends on the type of project, eg an Engineer in case study A said:

"I think it is depending of on the type of project. Architects often have introduced us to projects. If it is residential project they often have more power to control the project over us. However, if it is factory type of project where technical requirements are more important that how it looks. Therefore we (engineers) have more power to control the project."

A different perception that emerged in the case studies was that some stakeholders believed that project managers have power to control the construction project. For example a Supplier involved in case study A said:

"Sometime I also think that the project manager has power to control the project. We often don't know what discussion they have with the owner. As sometimes the owner made decision against our technical recommendations and they have chosen cheap options. At the end of the day, if that is what they hire us to do (to give recommendations) so we did our job already."

However, the Project manager in case study B noted:

"I think it is us (project manager). We have to be able to control the project to finish within the agreed timeframe and cost. Sometimes when I encounter owners who are only concerned about money, I have to counter and try to convince them with project technicality and have to show them that cheaper is not always the answer. Sometime I also have to fight with designers and contractors to maintain optimum benefit to the owner. This is what they hire me for which is to manage the project. So I have to use power by reasonable means so that I can gain control of the project."

The main concern of the project managers was the functioning of the building whilst the owner focuses on financial aspects. Projects managers see functionality as more important in this contestation inevitably leading to conflict. The differential perceptions of power and control and

the different discourses being used between stakeholders in these Thai construction case studies reflects apparent conflicting discourses, often resulting from non-recognition of the 'hidden' discourse of that project, i.e. who has the determined control. In some cases it was clearly the Owner, in others the Architect. However, throughout the projects, the discourse changed because problems emerged and specific, domain knowledge was required to solve problems. In these instances, the 'power' reverted to another stakeholder in the social web of the project. If that didn't occur, and this was identified as happening quite often, then negative consequences developed in that project.

Many stakeholders believed that the financial (economic/money) aspect has power to control construction project through different stakeholders role. Many times decisions about on-going construction problems were made based on the varied perceptions of power during the construction projects and each had a physical impact on the design of the building. The discourse of ' financial viability' became the mantra of control and determined the course of action, often as a result of decisions made by the Owner or a leading Architect or Project Manager. For example, one Engineer from case study C said:

"I think contract and specification of the project was important. At the end, the project has to finish and run the way it is supposed to. The other factor is time. In a business context, time equals money. If I have to start the factory on this date, it means that it has to be this date, cannot delay." He added: *"I think it is money, as a driving force behind owner and project manager. This is Thai construction industry culture "Time is money, money is time". PM often said come on just get on with it, carry out the design based on whatever information you have or guestimate the design. Then, we have to change our design later when more information became available. Then 2nd, 3rd round and so on and the designs change from architect as well."*

However in contrast to this view, the Project manager from the same case study C said:

"From my view, owner doesn't really have power to control the project. (property developer) owners also have been pressured by bank or sometime shareholders in case of public companies. So they have to make every decision based on time. The quicker, the better. In economic context, they use round the park numbers (estimate figures) to make decision plus risks and profit margins. It is also depend on how much risks they can take in particular issues. So that's why they don't need accurate information in the design. They just work based on information from conceptual level. Detail design information doesn't really mean anything to them (owners)."

One Owner from case study B added:

"Money and return of investment is power behind people. There are many times that decisions were made based on financial aspect even the technical aspects have advantage in every way"

The stakeholders interviewed in the three Thai construction projects showed that decisions in those construction projects were made in a majority of instances based on financial aspects, a discourse of money, enabling control by owners. Often sustainability, energy

sufficiency or high efficiency building designs were not used in many construction projects because they were more expensive than conventional methods. In some cases engineers provided sustainability feasibility study reports to present to clients to demonstrate all kind of benefits and advantages. However, return on investment was too long, therefore owners were not interested. This financially-driven mindset, discourse, was a major motivation for property development investors in Thailand. The sustainability and innovation aspects in the project designs were often neglected by decisions made based on economics and financial aspects where power is concentrated with non-technical stakeholders.

These Thai case studies also demonstrated that even the same stakeholder (project manager) also can make different decisions in the context of any construction project. There is no self-evaluation by the participants in this research to indicate who or which decisions are right or wrong. The data simply highlights the existing of differing and at time conflicting discourses, constructed by stakeholders based on their own perception of their roles and enhanced by the relative and differential perception of other stakeholders.

In Project C there was a clear example of how the power relationships changed. Initially the design was controlled by the Owner and Architect. They spoke of their visions and the architect played a key role up to a singular point in the construction project, early on in the build process. At that stage the project manager identified many design problems that had ignored sound engineering principles and these were going to have severe financial impacts. As a result of discussions between the Project manager and the owner, the architect was excluded from the discourse, what Foucault would see as 'punishment', and the discourse changed from one about design to one which incorporated both a financial aspect and an engineering aspect. The dynamics of the relationships had changed and the Project Manager was in control. The Project Manager said:

"I had to take this action and had a 'behind the curtain' discussion with the owner' to gain control of the project. Otherwise the construction process would stop and as a consequence delay project delivery. I knew that the architect was not happy, but if I had not done this, the project would have cost too much"

As a result of the differential discourses, the way they changed as problems emerged in the projects and the contestation over power and control in the Thai construction projects, there were three key effects on the projects themselves identified by the interviewees across the cases:

- Construction projects were delayed, adding substantially to costs;
- Engineering designs had to be revised and this added more work to engineers. Instead of getting the design done right the first time, the engineers had to re-do part of the designs or in some cases the whole design, adding extra time to the project and often extra costs; and
- In the construction project-working environment, some difficult stakeholders created a nuisance type, working atmosphere, adding further delay and increasing costs.

2. The traditional design-bid-built procurement process has an impact on stakeholder's perception of power, as the power and associated roles change during the project.

At the design stage in the Thai construction projects the suppliers of materials were not involved, as a consequence the decisions made in design were often inaccurate but suppliers had

very limited power to get involved and provide more accurate information. This affected implementation and increased the potential of poor quality in the construction and often led to increased rectification. The lack of power of suppliers in the design process often meant they had to supply products that were different from the design as power and control rested with building owners, engineers and architects in some projects and they had made decisions based on incomplete information, often using information from product's catalogues or websites without consultation. This happened because, during the design stage, design engineers don't know which suppliers will be awarded the contract for work and which products are going to be used in the project. Therefore, engineers can only provide general design guide that products from various suppliers can fit into the design. This is because if some specific products information has been incorporated into the design, it may limit design compatibility to some other products available in the market. As a consequence, the design is not fully open for competition. There is incompleteness in the information limiting the effectiveness of the design, created by a discourse of a design-bid-built approach adopted in these three cases studies. This accepted practice itself is a controlling discourse hampering design and the effectiveness of downstream stakeholders in the construction process, being required to accept the dominant role of the design architects and engineers, and the financial discourse of the owners. As an example one Contractor on case study C said:

"I think sometime the process itself make it difficult to control things. For example during the construction period we have been forced to carry on construction while the information is not complete. But because we are the end of the supply chain we just have to go with the flow. There were a lot of design crashes on site. To prepare RFI (request for information) or RFA (request for approval) and send it through procedure to PM then to consults and back to PM and then back to us sometime it's too late. Onsite can't wait that long"

In case study B the Architect involved added:

"There are some designs that have changed due to unforeseen circumstances with procurement. But it still depends on the role of relevant stakeholders. For example when we did detail designs we had chosen one type of material for the façade system, but when the construction began the contractor for some reason was unable to acquire the material that we specified in our initial design. I think there's something to do with the market at that time. So we had a meeting with the owner and suggested to them that if you want to use the initial option it will be very expensive but aesthetics wise it still remains the same, but if you change to another material, we might have to compromise aesthetics a little but it will be a lot cheaper. Then the owner had to make a decision."

In this case the impact that the situation had on the project was that the construction process has to be delayed because the supplier had to provide 'requests for approval' documents and send them through project communication channels via the project manager to the architect design engineer. The design engineer then had to review and send their approval back through the same channel. In parallel, another request for approval in terms of financial variation (from original designs) also has to be carried out in the same communication manner. Sometimes just to get one variation approved took at least a week due to all these documentation processes. The

discourse around process itself created contestation between stakeholders and challenged the overriding discourse of financial parameters

Suppliers believed that they had limited power within the social construct of the project to control anything in the Thai construction projects. They believed that their positioning at the end of the construction value chain meant that they received a lot of pressure from other stakeholders. In essence they were the receptors of what Foucault termed discipline in the web of relationships constituted by the stakeholders where deference emerged, differentially throughout the project, to the Owner, to Architects, to Engineers, and/or to Project Managers, and often to combinations of them, where domain knowledge was needed to resolve issues. By role and common procurement (design-bid-build) practice in Thailand had limited their power to control anything in the various construction projects. Suppliers often got involved in these Thai construction projects when all design was done and this limited their opportunity to provide input to the design process. One Supplier in case study A added:

"Many times, I encountered problems about design when we got the job. I have been in this business for more than 10 years. I worked with other brands before. A different in term of specifications and characteristics of products in a similar range among various brand are not significant. We know that, but I don't think engineers (designers) know the products right through, like us. So, when they design, sometime they design right application but they specify wrong products.

A Supplier in case study B also said:

"We know only there are some change in the project. One part of the building has been put on hold and waits for revised information during the construction stage but we don't know the reason. These changes won't impact us if we haven't started our production. But if we already started it will impact us ... This kind of error sometimes cost us a lot of money. However, sometimes we have had to accept it and get the job done and hopefully get the next project with them."

Suppliers had to be aware and be flexible to uncertainty in the Thai construction projects. The differing perceptions of power and who had control also has an impact on how stakeholders conducted business in relation to other stakeholders. Downstream stakeholders such as sub-contractors and suppliers often put up with more pressure in the Thai projects, as they hoped that being obedient to upstream stakeholders might bring them more future projects. The discourse of those with financial control and ownership dominated with respect to the construction method adopted in each project. What was evident that even though this was the case, the contestation referred to in the first section of this analysis, contest over control based on expertise and design, added an additional level of contestation, adding to more complicated power relations in these Thai construction projects, again adding time to projects, increasing costs and delaying completion.

3. **The stakeholders believe that the project characteristics, specifications, building code, regulation and the Thai building law also had power to control stakeholders and construction projects.**

A numbers of interviewees mentioned that in many cases power to control the project often related to the parameters around decision-making process, controlled by law and regulation, a discourse of the State. An Engineer from case study C said:

"I think sometimes that law and regulation has power to control the project. Sometimes we just have to do things that we don't want to because of regulation such as car park per number of residences, green area in proportion of overall area, or technical issues, for example an IT center with raised floor; the regulation said, if you raised the floor higher than 100mm you have to have smoke detection system. We don't want that because it costs a lot of money, so we have to try to push the raised floor level down, but we also can't because the IT system accommodates all that space already."

In all of these cases of Thai construction projects, the project's functionality, code and regulation characteristic and project specification were the basic logic that shaped specific characteristics of the buildings. However, the three case study participants discussed how they manipulated their way around these regulations and laws, albeit minimally but necessarily, to enable project completions, often adding additional cost. The discourse of law and regulation imposed by the State added a third layer of discourse imposition on stakeholders, creating situations where the discourses challenged the expertise discourse of architects, engineers and suppliers, the financial discourse spoken by the owners and developers and the discourse of practical build. There was a context of differential power and control each impacting on the effectiveness of the project and the capacity of all stakeholders to deliver on time and within budget.

DISCUSSION

The analysis of the three Thai construction project case studies in this research shows there are conflicts of interest among Thai construction stakeholders over control within the projects. Their understandings of who, in the social constructs of the projects, has power to control the project, either individually or collectively, is often based on perception that other stakeholders, or groups of stakeholders, have more power than them in an organizational construction project hierarchy, often contradictorily. In these Thai projects the differential perception of where power was constituted, varied. In some case the groupings of domain knowledge workers with expertise, were able to influence decisions based on their knowledge, at other times, such knowledge was excluded, because a prevailing discourse of financial constraints, imposed by the project owner, or by the Owner and the project manager. The 'web of relationships, in the Thai construction projects determined the discourse driving the project and thus the power relations that existed. The research showed that over time, these relationships could change and a new set of relationships emerge which changed the discourse, either in part, or for some limited time. In supply chain studies dominant stakeholders often position themselves to be able to control key resources such as information about possible construction projects in the future (Cox 1999). In the Thai cases of construction organizational structure, contractors and suppliers perceived that clients, architects, engineers and project managers have power to control them. This power can be in a form of "power of attorney" (Hohfeld 1917). This power was embedded in a form of ability to allow or not allow some stakeholders to get the job and become a member of the project team. This construction organizational structure was also

interconnected with design-bid-build procurement method used in the Thai projects. This design-bid-build is a web of relations often between a limited web, usually Owners and Project managers. Other players are then incorporated but they are controlled. Contractors and Suppliers are never included in this relationship and thus are stripped of any influence in decisions made. This type of procurement limited the involvement of the downstream stakeholders such as suppliers of products, essentially through their exclusion in the design process. For instance, contractors and suppliers who have expertise had no ability to offer their knowledge and expertise during the early stages of the construction project before the bidding process began. The design process was controlled by owners, financially, and at times by architects and by engineers. Therefore, downstream stakeholders had to behave in an obedient way by offering all sort of support such as technical information, business discount, products availability and faster product delivery to owners. As a result they hoped that they would have more chances to win during the bidding consideration process.

The extant literature argues that power and knowledge are intertwined (Cicmil et al. 2006; Clegg 2006; Clegg et al. 2006; Sage et al. 2012), then, a person who holds knowledge should be able to used knowledge as power to control situation. Foucault (1980) argued that 'knowledge is power.' In this study, it was not always the case. The three Thai case studies show that in Thai construction industry, financial considerations, a discourse of money and risk, was one of the factors that enabled power to control the construction projects emerged in the web of relations of Owners, Architects, builders, Engineers, Project managers and Suppliers, through the roles of owners. These owners included individual owners and public company type owners where money is invested by shareholders (Donaldson et al. 1995). On many occasions in these Thai case studies stakeholders such as engineers, contractors and suppliers used "technical knowledge" to demonstrate benefits and advantages that this knowledge can offer to the construction projects. However, this knowledge often was ignored or neglected and instead the decisions were made based on "money" only because these options were perceived to be too expensive. There was in these case studies a contest between the discourse of money and the discourse of expertise. Financial aspects empowered some stakeholders rights to make decision or control construction projects supporting previous work by (Clegg 1992; Newcombe 2003). In a business sense return on investment was the most influential discourse in all three Thai construction projects. It is fair to say then that power in these cases became detached from knowledge because "human valuation" (Boulding 1990), in this particular circumstance to make financial profits from construction projects, was the dominant discourse and informed where power was located in the social structure. The reason for this power and knowledge detachment perhaps could be the culture of industry practice in the Thai construction industry. Further research need to be undertaken on this for clarification.

Participants from each of the three Thai projects mentioned that the desired working environment in a construction project is when building functionalities (project characteristics) are the driving "power" that controls the projects. This is because a person or group of people should not possess power, in their opinion. They argue in the social structure that constitutes a construction project, that Builders and Suppliers should have more power to influence design, rather than the existing nature of the power relationships where they are excluded. Therefore, when problem occur a project team can use knowledge to solve the problems without having to be concerned that their solutions will upset anyone. This makes the working environment desirable, in their opinion, and construction projects can run smoothly. However, this rarely happens. This is because construction project team is a collection of stakeholders who come to

join the team and everyone has their own business goals behind this social activity. They construct social relations and inevitably power relations ensue. Power emerges through importance within the social relations of the project and who has the capacity to make the project work. Inevitably, as this research showed, this leads to three levels of contestation between discourses of money, discourses of expertise and knowledge and discourses of legality and regulation imposed by the State. Reconciliation by all stakeholders in their power relations dealing with contests between ownership, goals, design and construction delivery had led in these Thai projects to cost overruns, poor working relationships, project delays, and poor quality of materials used in many instances where compromises had to be made.

The initial stages of this research were informed by the extant work of (Cashmore et al. 2014; Pinto 2000; Sage et al. 2012) who showed that stakeholder's power and the relationship among stakeholders affects construction projects, albeit in an overall perspective but their analysis lacked those power relationships being deconstructed and differentiated. This analysis, through deconstruction of the discourse at play in the three Thai construction projects, a perspective of power and its effects in construction projects which differentiates the relativities between stakeholders, highlights the complexities inherent in multiple discourse and demonstrates that power relations change, the perceptions differ and are dynamic, creating uncertainties and inefficiencies in the construction process, all contributing to increases in project time, stage delays, poor working relationships, increased costs and sometimes poor delivery outcomes. Power relations are important in construction, as this paper had argued, and its impact where these relationships are strained leads to significant cost and project delay disadvantages for those controlling the dominant discourse – money.

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