PHASE TRANSITION DRIVERS OF WITHDRAWING BEHAVIOUR IN CONSTRUCTION PROJECT DISPUTE NEGOTIATION

CHOW PUI TING

DOCTOR OF PHILOSOPHY
CITY UNIVERSITY OF HONG KONG
AUGUST 2010
CITY UNIVERSITY OF HONG KONG

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Submitted to
Department of Building and Construction

in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

by

CHOW Pui Ting

August 2010
Abstract

Inspired by the concern over the dispute epidemic within the construction industry, this research study sets out to examine behavioural issues in construction project dispute negotiation (CPDN). It is well recognized that the best outcome for dispute resolution is a negotiated settlement. The chance of reaching a settlement is often hampered if one or more of the negotiators lose their interest to continue with the negotiation. In such cases, negotiators would withdraw. Withdrawal (WA) is defined as negotiators’ loss of interests to continue the negotiation and has emerged as one of the popular negotiation research topics in recent years. The behaviour associated with WA underlines withdrawing behaviour (WB). A timely study of WA and WB helps to sustain the competitive advantages of construction practitioners in resolving the project disputes on their own. The main objective of the research study is therefore to examine the dynamics underpinning WA in CPDN from a behavioural perspective. The research has five phases of work; (1) reviewing preludes, sources, and finales of negotiation failure (NF) and collecting evidence of symptoms and resumption sequels of WA; (2) conceptualizing drivers of WA in a WA-behavioural primers relationship framework; (3) analyzing phase transition of WA in a cusp catastrophe model; (4) conducting experiments to investigate WA; and (5) analyzing WA in negotiation interaction.

The first phase of this research study aims to enhance the understandings of NF and WA (Chapter 2). Literature search and interviews were the main approaches to this phase of the study. Firstly, the objective is achieved through conceptualizing the preludes, finales and sources of NF from previous studies on disputes. Three preludes of NF have been identified: (1) accumulation of minor disputes; (2) reduction in socio-psychological attraction to negotiation; and (3) loss of interest to negotiate. Three
finales of NF have been located: (1) regression of contracting organization; (2) disintegration of contracting organization; and (3) wasted resources and time in further resolution. The sources of NF have also been studied: (1) contract zone conundrum; (2) selection of negotiator; (3) political pressure; and (4) withdrawal. Secondly, the symptoms and resumption sequels of ultimate WA are investigated. It is suggested that ultimate WA is signalled by: (1) series of dysfunctional behaviour; (2) divergent views among factions; and (3) slowing down of the negotiation process. The major consequences of resumption of withdrawn negotiation are: (1) substantial fee to re-open a withdrawn negotiation; (2) reorganization of the withdrawn camp to avoid diverging view; and (3) unveiling of sensitive information to the counterpart. The completion of an in-depth anecdotal longitudinal analysis of dispute cases allows further conceptualization of drivers of WA in a WA-behavioural primers relationship framework.

The second phase uncovers the drivers of WA in a WA-behavioural primers relationship framework in CPDN (Chapter 3). Review of the behavioural tradition of negotiation study suggests that there are three behavioural primers governing WA. They are (1) motivation primer (MO) which is composed of task subscale (TA) versus relation subscale (RL), (2) cognition primer (CO) which includes emotion subscale (EM) versus rationality subscale (RN), and (3) personality primer (PE) which is made up of competition subscale (WI) versus cooperation subscale (CC). Accordingly, the relationship framework between WA and the three behavioural primers is proposed and is subjected to a statistical analysis of structural equation modelling (SEM). The relationship framework is statistically sound. The influences of the three behavioural primers on WA are different. Their effect on WA in descending order is CO, MO, and PE. Non-relationship-focused negotiators are likely to withdraw. For CO, only EM
shows significant effect suggesting that emotional negotiators are more likely to withdraw. Likewise, competitive negotiators are found to withdraw more likely under the PE effect.

The results of the second phase suggested that negotiation behaviour and perceptions are vital to the success of CPDN. Moreover, a number of negotiation studies suggest that WA exhibits a bimodal effect. As such, studying the phase transition of WA helps researchers probing negotiation behaviour in a renewed perspective. In the third phase of this study, WA is examined under a cusp catastrophe model (Chapter 4). The theme of the third phase is to test if WA displays a catastrophic pattern. If yes, what is the splitting factor? The pairs of subscales of the three behavioural primers are chosen to be the normal and splitting factors alternatively in the proposed cusp catastrophe models of WA. The hypothesis of sudden phase transition of WA is analysed by the use of Cuspfit program. Based on the relationship framework, 6 cusp catastrophe models are constructed for the Cuspfit analysis. One of the cusp catastrophe models shows sudden jump in the level of WA under the influence of MO where TA is the normal factor and RL is the splitting factor. In fact, the results of CT suggest that there is abrupt change when some of the behavioural primers reach their respective thresholds. With the understanding of the models, construction practitioners should be aware of sudden WA, and avoid deterioration of relationship in general and in particular when task is relatively complex. This finding, again, highlights the importance of behavioural aspects in CPDN.

The findings of the second and the third phases of the study collectively point to the need to address the contextual factors, a premise on which discussions resides. Negotiators should be mindful of WA. Task-, emotion-, and competition-oriented
negotiators exhibit higher WA in the WA-behavioural primers relationship framework. In addition, the cusp catastrophe model confirms that the catastrophic phenomenon of WA. Sudden WA occurs even there is smooth change of the underlying factors. The chance of continuing negotiation and reaching a settlement can be improved by introducing relationship-focused negotiators in negotiations. The study successfully reduced the number of negotiation variables to a manageable number.

The findings of the previous phases of the study suggested that negotiation behaviour is contingent to the situation. Experiment is one of the most common ways to collect data on the behaviour of negotiators. **Chapter 5** reports a design of an experiment in examining WA in CPDN. The theme of this stage of the study aims at developing ways (1) to capture the important messages and information of WA in negotiation interaction that can be rarely collected by other methods, and (2) to examine instantaneous interactive behavioural response of negotiators. For the experiment materials, a hypothetical construction project (the “Project”) is developed based on literature review and in-depth interviews. In the project, there are four disputes between the contractor and the developer. The disputes are commonly found in the construction industry and they are (1) rapid inflation of steel, (2) additional sky garden, (3) prolonged inclement weather, and (4) change of an internal finishes supplier. There are five negotiated settlements (Option A to Option E) and one non-negotiated settlement (Option F) for each issue. The options for analysis, thus, are reduced to 1296 manageable combinations. There are monetary and performance payoffs for each option. The payoffs are projections of a collective representation of time, cost, and quality implied in each of the options. The contractor and the developer have different utility functions of payoffs. They are not allowed to exchange the list of payoffs and reveal their bottom line. Thus, the only way to achieve negotiated settlement is through communication. For
the manipulation and methods of data collection, two different instructions from the company’s director are used as the extrinsic motives. As negotiators are first classified as either competitors (ID) or co-operators (CP), there are three types of dyad composition including homogenous-competitors dyad (2ID), homogenous-co-operators dyad (2CP), and heterogeneous dyad (1ID-1CP).

Experimental analysis can facilitate the investigation of negotiation behaviour. In this respect, the fifth phase of the study is about the study of the effect of WA in negotiation interaction in an experiment of CPDN (Chapter 6). The theme of this stage is to acknowledge that negotiation is a dynamic process which requires careful examination of the negotiation interaction. The success or otherwise of negotiation largely depend on negotiation interaction. Subsequent to the negotiation experiment (Chapter 5), negotiation behaviour was studied by examining WA, dyad composition (DC), and negotiation style (NL), which in turn, govern negotiation strategy (NG), as well as negotiation outcome (NO) in an experimental analysis. The process of negotiation is divided into multiple stages for analysis. There are majorly three stages including pre-negotiation, negotiation, and post-negotiation stages. In the pre-negotiation stage, any two invited participants who had completed and returned are paired up and assigned as the sole representatives of either the contractor or the developer according. The date and time for the experiment of the dyads are arranged. With the data collected, the results of the correlation analyses suggested that on one hand, WA is found to be positively correlated with distributive NG. On the other hand, WA is negatively correlated with integrative NG. The use of distributive NG by the counterpart likely evokes negotiators’ post-negotiation WA. Nevertheless, WA is reduced if the counterparts use integrative NG. Both monetary and performance payoffs of negotiators decrease with increased WA. However, the counterparts obtain higher performance payoffs when negotiators
exhibit high levels of WA. The results of the ANOVA analysis suggested that reported use of distributive NG of co-operator increases in heterogeneous dyad.

The contribution to knowledge of this study lies in the summary findings. Construction project disputes are content specific with resolution options governed by the contract which fit neatly with the rationality framework. Traditional model explains negotiation in a prescriptive and economic point of view. As such, negotiators are described as rational utility maximizers. If positive contract zone is identified, negotiators should be able to reach a negotiated settlement. Nevertheless, failure in CPDN is not uncommon. The prospect of having a successful negotiation is hampered when behavioural factors creep in. This study aims to uncover the underlying factors affecting WA in CPDN from a behavioural perspective. The behavioural tradition of negotiation study identifies three behavioural primers: MO, CO, and PE. Emotion under the cognitive domain is found to be the most critical contributor to WA in CPDN. This finding reinforces that negotiators should be good at the technical aspects of the subject matter which is the content of the dispute as well as being emotionally stable. In the behavioural point of view, it is suggested that phase transition of WA occurs even there is a smooth change of underlying factors. The question becomes how to detect this sudden change of negotiation behaviour. It is suggested that catastrophic change of WA occurs under the influence of MO. The finding shows that negotiators should be mindful of unexpected behavioural jump of their counterparts even under a slowly changing environment. In phase four and phase five of the study, experienced construction practitioners were invited to participate in an experiment of CPDN. The data collected in the experiment has been analyzed. The results suggested that WA and PE influence negotiation interaction as well as negotiation outcome. In sum, the research results reinforce the behavioural school of thought that WA governs the success or otherwise of CPDN.
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