Chapter 11
The Behavioural Dimensions of Construction Dispute Negotiation

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Abstract Negotiating dispute involves finding common grounds over disagreements, thus sometimes is viewed as an art. Construction disputes are always negotiated first before other resolution methods come to service. Reaching a settlement through negotiation helps to maintain a harmonious relationship between the disputants. In these regards, negotiation is the most cost efficient method to resolve construction dispute. Negotiation skill therefore is essential to all construction professionals. This chapter first gives a brief introduction of the traditions of negotiation studies. Then, the causes of negotiation failure are discussed with emphasis on the behavioural factors. A study on the relation between negotiating style and negotiation outcome is presented to illustrate the impact of behavioural factor. It is found that the use of obliging, dominating and avoiding styles appear to be less influential in achieving functional negotiation outcomes than using integrating style. The use of compromising style is also found to be a practical approach in resolving dispute.

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11.1 Introduction

Construction contracting environment is dispute-laden (Rhys Jones 1994). This can be attributed to the fact that construction project management requires the coordinated effort of a temporarily assembled project team comprising professionals of various disciplines. Project team members have to pursue their own goals and maximise their own benefits and sometimes sacrifice those of the others (Newcombe 1996; Walker 2002). In addition, managing design changes during the course of construction laid futile ground for the germination and manifestation of construction disputes. Dispute once crystallised requires a proactive resolution that prevents aggravation of the negative impact on project performance (Brown and Marriott 1999; Fenn et al. 1997). Disputes are always negotiated first before other resolution methods come to service (Brown and Marriott 1999; Cheung et al. 2002a; Cheung and Yeung 2002; Goldberg et al. 1992; Hibberd and Newman 1999). Reaching a settlement through negotiation helps to maintain a harmonious relationship among disputants. Thus, negotiation is the most cost efficient method to resolve construction dispute (Ren et al. 2003). Negotiation skill therefore is essential to all construction professionals, in particular those at managerial position. In fact, individuals have to negotiate with one another to establish common grounds, arrange their affairs in commerce and everyday life, and reconcile areas of disagreement (Brown and Marriott 1999). As such, negotiation has been a topical issue in the management research. This chapter first gives a brief introduction of these traditions of negotiation studies and then discusses the causes of negotiation failure from a behavioural point of view. As an illustration, a study on the relation between negotiators' style and negotiation outcome is presented.

11.2 Traditions of Negotiation Studies

Carnevale and Pruitt (1992) identified three main traditions of negotiation studies. The first consists of guidelines to international and industrial negotiators (Lewicki and Litterer 1985; Murnighan 1991). These guidelines are valuable references but must be used with contextual and cultural caveats. The second tradition involves the use of mathematical models based on rational approaches advocated by economists and game theorists (Nash 1950; Kagel and Roth 1991; Zeuthen 1930). These models are both descriptive, in the sense of specifying the parameters within which negotiators operate or some of the dynamics of negotiation behaviour, and prescriptive in recommending rational policies. However, these models tend to have specific focus with selective indicators and restrictive assumptions. Rapid advancement in information technology in the last two decades has paved the way for the development of computer-based decision support systems to assist negotiators (e.g. Carmel et al. 1993). The accessibility of the World Wide Web has further released the geographical obstacles that prohibit face to face negotiation (Cheung et al. 2004; Druckman et al. 2002; Griffith et al. 2002; Holsapple et al. 1998).

The third tradition emphasises on empirical studies in both laboratory and field settings (Douglas 1962; Steven 1963; Walton and McKersie 1965). This tradition is useful in explaining the hurdles and difficulties faced by negotiators. This tradition helps in highlighting causes of negotiation failure.

11.3 Causes of Negotiation Failure

Four types of negotiation failure are identified, including contract zone conundrum, negotiator's selection, political pressure and withdrawal (Downie 1991; Mnookin 1993; Sebenius 1992; Underdal 1983). Examples of each type of negotiation failure in construction dispute negotiation are given in Table 11.1.

11.3.1 Contract Zone Conundrum

Sebenius (1992) explains that people negotiate in order to satisfy their collective interests better through joint decision-making. In this connection, the normative approach of decision-making in negotiation is that negotiators evaluate their alternatives with reference to both their interests and those of their counterparts. Moreover, it is important to distinguish parties' underlying interest from issues under negotiation. The efficiency of bargaining is calculated based on the size of the contract zone (Neale and Bazerman 1985). However, there is no readily available means to determine the contract zone. In real life situations, decisions are mix-motive with proposals being the aggregate utility covering several issues. Contradictory expectations on issues to be negotiated are more problematic as these may lead to a zero or small contract zone. The failure to ascertain the contract zone may eventually lead to deadlock and stalemate (Neale and Bazerman 1985). The availability of positive contract zone is a prerequisite for a settlement (Fig. 11.1). Misjudgment on the contract zone would hamper the prospect of a negotiated settlement.

11.3.2 Selection of Negotiator

Labour dispute often involves the union, which supposedly represent the members. Its presence makes dispute events more newsworthy. The dispute is then publicised whereby existing images, stereotypes and expectations are projected. The ruling of union may not meet with individual members' specific needs or aspirations. Different preferences on the disputing issues may end with internal diversification. The internal structure of a union may split into several groups of acute disagreement. In this connection, the inability caused by absence of unanimous decision may ultimately lead to negotiation cessation. The principal/agent situation is analogous to the union/member scenario. Problems can arise when the

Table 11.1 Possible causes of negotiation failure

Possible causes of negotiation failure
Contract zone conundrum
Dilemmas in concession-making and issue management
Unresolvable nature of issue
Strategic barrier
Reactive devaluation of compromises and concessions
Many solution concepts
Limitation in game's structure, rules, and possible moves are not common knowledge
Widely scattered negotiation outcomes in practice
Uncertainty
Inaccurate information
Selection of negotiator
Union preference, politics and internal structure
Principal/agent problem
Pressure
External pressure
Politically inadequate
Withdrawal
Cognitive barrier
Significant departures from full game-theoretic "rationality"
Insensitivity to behavioural expectations

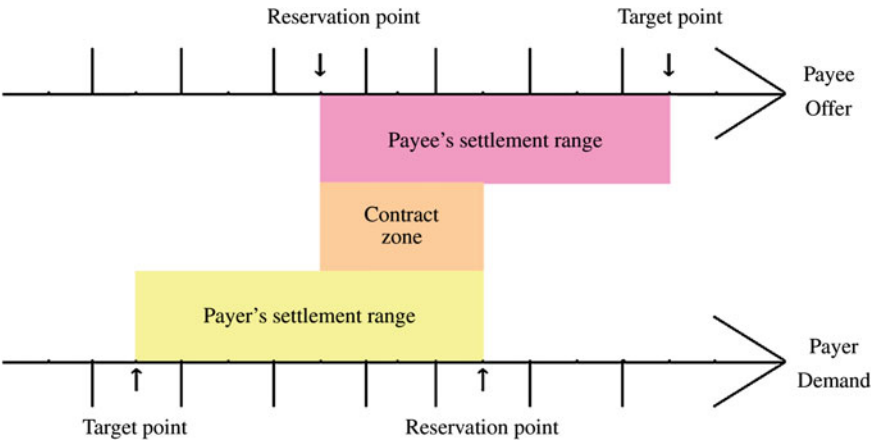

Fig. 11.1 Contract zone

interest of the agent conflicts with that of his/her principal (Lewicki and Litterer 1985). Whilst the use of professional advisors like claim consultants is quite common, prudent caveat against the negotiation being hijacked should be exercised (Cheung et al. 2000). The importance of having the 'right' of negotiator therefore cannot be undervalued.

11.3.3 Pressure

Pressure affects negotiating behaviour in two ways. The first is external. The continuity of an organisation depends on not only its own capability but also the external market conditions. Organisation who fails to deal with external pressure is unlikely to develop and sustain its competitive edge. The time and resources invested in the negotiation can be used in other more productive way. The second factor is political. Unduly strong public expectations on a conflict may hinder its resolution. A politically inadequate solution is a misfit between what a theoretically desirable solution and what is expected. Having an outcome that meets technical, economic and political expectations may well be just an ideal.

11.3.4 Withdrawal

Cognitive barrier can be explained in the context of information processing. Human decision-making employs inferences and judgments. Loss aversion and framing effects can have critical influence on negotiator's behaviour. Departure from the canons of rationality is possible. Insensitive to behavioural expectations is another possible cause of negotiation failure. Behavioural expectations are those related to the image and reputation of the negotiator. In other words, "*negotiation is not simply a decision-making process; it is also to some extent a matter of fame and reputation*" (Iklé 1964). Iklé (1964) described three possible options for a negotiator when confronted with critical decisions; (1) accepting currently available terms in the proposals from counterparts; (2) continual negotiating in the hope of securing better terms; and (3) breaking off talks with no intention of resuming them in short-run. Option (3) denotes withdrawal and is considered as a negotiation failure.

In this regard, the relationship between negotiation failure and negotiating behaviour has been a major concern under the behavioural tradition (Cohen 2001; Stevenson 1991; Tor and Bazerman 2003; Underdal 1983). These studies advocate that negotiators are critical in the success or otherwise of a negotiation. Adding to this collection, the relationships between negotiating behaviours and negotiation outcomes is further examined.

11.4 The Behavioural Tradition of Negotiation Studies

Majority of negotiation studies of the behavioural tradition investigate the effects of personality on negotiating behaviours (Allred 2000; Lytle et al. 1999; Mintu-Wimsatt and Calantone 1996; Shell 2001). These studies are useful in suggesting guides of good negotiation practices. Inefficient negotiation discourages early

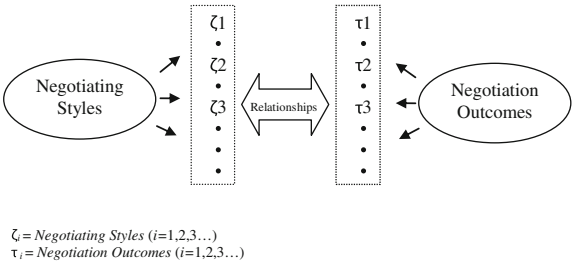

Fig. 11.2 The conceptual framework for the study

settlement, and creates an adversarial contracting environment and thus renders the use of expensive arbitration or litigation (Ren et al. 2003; Zack 1994). One of the reasons for such inefficiency is due to the misinterpreting the negotiating style of the negotiators. The following five steps are applied to investigate the relationships between the negotiating styles and negotiation outcomes.

(i) Identify a style classification framework from literature and select a measurement tool;
(ii) Collect data from experienced construction professionals on negotiating styles and negotiation outcomes;
(iii) Test the authenticity of the tool with the data collected;
(iv) Develop taxonomies for the negotiation outcomes; and
(v) Investigate the relationships between the negotiating styles and negotiation outcomes.

The conceptual framework of this study is given in Fig. 11.2.

11.5 Step 1: Negotiating Styles and Its Measurement

People negotiate every day. To study the habitual negotiating characteristics of construction professionals, reference is made to previously completed models (Perdue et al. 1986). Negotiating style is often framed by conflict management style. Follett (1940) suggested five ways to handle conflict: domination, compromise, integration, avoidance and suppression. Blake and Mouton (1964, 1970) presented a conceptual framework for the classification of interpersonal conflict handling styles. These are forcing, withdrawing, smoothing, compromising, and problem solving. In fact, this framework has widely been used in negotiation and conflict management studies (Chakrabarty et al. 2002; Gross et al. 2000; Hammock et al. 1990; Oetzel 1998). In addition, these five styles can also be gauged by the degrees of concern for production and people. Thomas (1976) modified this scheme and took into account the intentions of the party. Similar to the approach of Blake and Mouton (1964), Rahim and Bonoma (1979) and Rahim (1983) differentiated the styles of handling interpersonal conflict by two basic dimensions:

concern for self and concern for others. Concern for self represents the degree to which a person attempts to satisfy his or her own concerns. Concern for others represents the degree to which a person wants to satisfy the concerns of others. These two dimensions describe the motivational orientations of an individual when exposed to a conflict. Supported by the studies of Ruble and Thomas (1976) and Van de Vliert and Kabanoff (1990), the two-dimensional model was refined. The integrated model has five conflict handling styles: integrating, obliging, compromising, dominating and avoiding. This refined model is called Dual Concern Model (Rahim 1992).

An effective negotiator adopts a negotiating style that fits the circumstances (Rahim 2002). A style is considered appropriate if its use can result in effective solution formulation to a problem. In this respect, the predominant view is that integrating or problem-solving style is most appropriate for achieving "win–win" solution (Blake and Mouton 1964; Likert and Likert 1976). However, Rahim (2001), Rahim and Bonoma (1979) and Thomas (1976) suggested that one style might be more appropriate than another depending upon the situation. In general, integrating and to some extent compromising styles are appropriate for dealing with strategic issues. The other styles can be used to deal with tactical or day-to-day problems (Rahim 2002).

The next task in this Step 1 is to select an appropriate style measurement instrument for use in this study. The selected instrument should be commonly adopted in similar studies. In this regard, the conceptual underpinnings suggested by Blake and Mouton (1964, 1970) and the dual concern model of Rahim and Bonoma (1979) and Rahim (1983) are widely used in the study of conflict-handling styles (Friedman et al. 2000; Hammock et al. 1990; Lee et al. 2003; Oetzel 1998; Rahim 1983; Rahim et al. 2000; Rahim 2002; Van De Vliert and Kabanoff 1990). Hence, an instrument that has been developed basing on the above observations is considered appropriate for this study. Accordingly, the Rahim Organisational Conflict Inventory-II (ROCI-II) was used to measure negotiating styles. This instrument has been designed to measure the five conflict management styles suggested by Blake and Mouton (1964, 1970): integrating, obliging, dominating, avoiding and compromising.

11.6 Step 2: Data Collection

A questionnaire survey was used to collect data. Two types of data were collected from each response; one on negotiating behaviours of the respondent and the second on the negotiation outcome with reference to a recent negotiation completed by the respondent. For data on negotiating style, the ROCI-II, which consists of 28 statements on negotiating behaviours, was modified to suit the construction context. A 7-point Likert scale was used to measure the degree of agreement on the practice of the behaviour during the negotiation. A high score represents stronger agreement. As for the second type of data, it is based on a

Table 11.2 Composition of respondents

Grouping	Organisation type	Number	Percentage
Clients	Government departments	11	15.7
	Private developers	6	8.6
	Consultants (Surveyors, Architects and Engineers)	26	37.1
Contractors	Main contractor (Building works)	25	35.7
	Sub-contractor	2	2.9
	Total	70	100

literature review on the possible negotiation outcomes under the influence of the five negotiating styles (Friedman et al. 2000; Gross and Guerrero 2000; Prein 1976; Rahim 1983; Rahim et al. 2000). The respondents were asked to assess the degree of achievement with respect to the itemised outcomes on a 7-point Likert scale. A total of 150 questionnaires were sent to construction professionals holding senior positions in Hong Kong. The list was compiled by identifying key personnel from the government and professional directories and web sites of companies. 70 of them responded and returned the questionnaire. The response rate was 47 % and 64 % of the respondents have more than 10 years experience in construction. As for employing organisations, 60 % of the respondents work for clients while the other 40 % are employees of contracting organisations. The composition of the respondents by organisation type is shown in Table 11.2.

11.7 Step 3: Testing the Authenticity of the ROCI-II Instrument

The identification of the five styles of Blake and Mouton (1964, 1970) by the ROCI-II Instrument is firstly analysed by the use of Principal Component Factor Analysis (PCFA). This technique examines the factor structure. Interpretation of variables can be accomplished by summarising the data according to the constructs (Hair et al. 1995).

Before performing a PCFA, the suitability of the data was first evaluated by examining the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy. The KMO value for the PCFA is 0.679, a figure above the threshold requirement of 0.5 (Holt 1997; Cheung and Yeung 1998; Cheung et al. 2000). In addition, the low significance of the Bartlett test of sphericity suggests the adequacy of the data set to perform PCFA. To shortlist factors, the eigenvalue-greater-than-1 principle, which is the commonly used criterion, was applied. Factors having an eigenvalue greater than 1 were considered significant, and those with eignvalue below 1 were discarded. In order to simplify the factor structures and obtain more meaningful factor solution, rotation of the factor matrices was performed to reduce the ambiguities that often accompany initial un-rotated factor solutions. Varimax rotation was employed in the present study. The final factor matrix for negotiating

style after Varimax rotation is given in Table 11.3. The authenticity of the ROCI-II instrument was examined by comparing the items included for each factor with those indicated by the designer. But for items 3, 4 and 27, the items retrieved for the five factors were identical to the original design of the instrument (Chakrabarty et al. 2002; Hammock et al. 1990). The interpretations of the extracted five factors therefore generally fit well with the style classification of Blake and Mouton (1964, 1970). As such, it is reasonable to use the ROCI-II as the instrument to valid measure of negotiating styles of construction professionals.

By calculating the average scores respective to the five factors, the average scores for the five negotiating styles were obtained. Table 11.4 shows the summary. Although the differences between these scores are not significant, nonetheless, the style that displays a higher average score may be viewed as the one that is more often used as compared with the others. In this context, compromising, among others, is the style most often used by the respondents.

11.8 Step 4: Taxonomies of Negotiation Outcomes

Taxonomy is a system by which categories are related to one another by means of class inclusion (Rosch 1988). In this step, taxonomies of negotiation outcomes were developed for use in Step 5. This was also achieved by the use of Principal Component Factor Analysis (PCFA); the procedures for such are described in Step 3. Similarly, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was examined. The KMO values for this PCFA are 0.660, which is also above the threshold requirement of 0.5. Furthermore, the low significance of the Bartlett test of sphericity suggests the adequacy of the data set to perform PCFA. The factor matrix for negotiation outcomes after Varimax rotation is shown in Table 11.5. The seven factors extracted can be described as follows:

Factor 1 Problem Solving
Factor 2 Conflict Escalation
Factor 3 Relationship Deterioration
Factor 4 Inaction
Factor 5 Further Disagreement
Factor 6 Relationship Maintained
Factor 7 Conflict Reduction.

The following section describes each of the factors extracted. These factors are further identified as either functional or dysfunctional negotiation outcome. These identifications are needed to enable the working of Step 5.

Factor 1 is named as Problem Solving since the items are related to solution formulation, conflict reduction and achievement of compliance. Problem solving, a desirable negotiation outcome in conflict resolution, is no doubt the main goal of every negotiation. In construction industry, this negotiation outcome is ideal if a

Table 11.3 Rotated factor matrix for negotiating styles

Item no.		Factors[a]				
		IN	OB	DO	CO	AV
Factor 1: *Integrating*		I	II	III	IV	V
23	I collaborate with the other to come up with decision acceptable to us	**0.79**	−0.03	0.10	0.61	0.08
22	I try to bring all concerns out in the open so that the issues can be resolved in the best possible way	**0.74**	0.00	−0.08	0.01	0.18
12	I exchange accurate information with the other so that we can solve the problem together	**0.70**	0.27	0.15	0.22	−0.09
5	I try to work with the other to find solutions to a problem which satisfy our expectations	**0.65**	0.27	0.27	0.03	−0.07
1	I try to investigate an issue with the other to find a solution that will be acceptable to everyone involved	**0.63**	0.22	0.11	0.34	−0.14
28	I try to work with the other for a proper understanding of a problem	**0.46**	0.18	0.31	0.43	0.10
Factor 2: *Obliging*		I	II	III	IV	V
24	I try to satisfy the expectations of the other	0.19	**0.76**	−0.08	0.05	0.06
10	I usually try to accommodate the wishes of the other	0.23	**0.76**	0.09	0.19	0.24
2	I generally try to satisfy the needs of the other	0.07	**0.76**	−0.03	0.12	−0.20
11	I give into the wishes of the other	−0.17	**0.66**	0.12	0.28	0.25
19	I often go along with the suggestions of the other	0.09	**0.65**	0.00	0.10	0.30
13	I usually allow concession to the other	0.38	**0.55**	−0.16	−0.08	0.27
3	I attempt to avoid being "put on the spot" and try to keep my conflict with the other to myself	0.34	**0.42**	0.23	0.35	0.31
Factor 3: *Dominating*		I	II	III	IV	V
9	I use my authority to make a decision in my favor	−0.12	−0.05	**0.89**	0.12	0.05
8	I use my influence to get my ideas accepted	−0.05	0.13	**0.86**	0.19	0.01
25	I sometimes use my power to win a competitive situation	0.15	−0.07	**0.78**	−0.07	0.33
21	I am generally firm in pursuing my side of the issue	0.45	−0.08	**0.74**	0.01	0.12
18	I use my expertise to make a decision in my favour	0.36	0.01	**0.66**	0.12	0.08
Factor 4: *Compromising*[b]		I	II	III	IV	V
7	I try to find a middle course to resolve an impasse	0.16	0.05	0.00	**0.82**	0.16
14	I usually propose a middle ground to break deadlocks	0.01	0.14	0.17	**0.72**	0.13

(continued)

Table 11.3 (continued)

Item no.		Factors[a]				
		IN	OB	DO	CO	AV
15	I negotiate with the other so that compromise can be reached	0.49	0.15	−0.06	**0.62**	0.18
4	I try to integrate my ideas with the other to come up with a decision jointly	0.44	0.37	0.22	**0.49**	0.16
20	I use "give and take" so that a compromise can be reached	0.44	0.29	−0.02	**0.47**	0.18
27	I try to avoid unpleasant exchanges with the other	0.01	0.12	0.23	**0.47**	0.44
Factor 5: *Avoiding*		I	II	III	IV	V
16	I try to stay away from disagreement with the other	0.10	0.05	0.10	0.05	**0.85**
17	I avoid an encounter with the other	0.12	0.21	0.09	0.06	**0.80**
26	I try to keep my disagreements with the other to myself to avoid hard feelings	0.07	0.14	0.15	0.24	**0.63**
6	I usually avoid open discussion of my differences with the other	−0.14	0.11	0.05	0.29	**0.61**

[a] IN = Integrating; OB = Obliging; DO = Dominating; CO = Compromising; AV = Avoiding
[b] The most used style in construction negotiation

Table 11.4 Average scores of negotiating styles

Negotiating styles	Average scores
1. Integrating	4.16
2. Obliging	4.26
3. Dominating	4.17
4. Compromising	4.56
5. Avoiding	4.20

dispute is settled with a solution that satisfies the goals and needs of the parties. Thus, it can be identified as a functional negotiation outcome (Rahim 1992), i.e. an outcome generally favoured by the disputants. Factor 2 is described as Conflict Escalation because these outcomes are characterised by higher level of conflict. As such, Factor 2 is identified as a dysfunctional outcome (Rahim 1992), i.e. an outcome having a negative connotation as the dispute is unlikely to be resolved with escalating conflict. Factor 3 relates to the deterioration of relationship between the disputants. Relationship between the negotiators could be a critical factor in tackling the conflict. In Hong Kong where this study was conducted, relationship is a prime factor in business dealings. Except for Government projects, there is no requirement for open tender. As a matter of fact, private developers would not invite contractors with whom they have bad relationship to tender for their projects. Even in publicly funded projects, attitude to claim forms part of tender evaluation (EWTB 2002). Thus, with deteriorating relationship, chance of future cooperation becomes distant. This factor therefore is a

Table 11.5 Rotated factor matrix for negotiation outcomes

Item No.		Factors						
		I	II	III	IV	V	VI	VII
Factor 1: *Problem solving*								
11	Less conflict-laden environment was produced.	**0.71**	0.13	−0.31	0.30	−0.14	0.31	0.07
12	More behavioural compliance with both parties was achieved	**0.70**	−0.14	0.24	−0.06	0.26	−0.06	0.07
1	The solution found satisfied the goals and needs of both parties	**0.65**	−0.04	−0.41	0.04	−0.25	−0.13	0.07
2	Optimal and creative solution to problem was found	**0.65**	0.12	−0.25	0.11	0.16	−0.24	0.10
16	The levels of conflict were reduced	**0.58**	−0.21	−0.17	0.41	0.10	0.24	−0.06
Factor 2: *Conflict escalation*								
19	More task conflict was experienced	0.14	**0.78**	0.25	0.23	−0.06	0.00	0.06
18	A higher level of ongoing conflict was experienced	0.14	**0.76**	0.37	0.12	0.11	−0.02	−0.22
7	There was lack of basic information needed to construct solutions to the conflicts	−0.11	**0.71**	0.16	0.21	0.29	0.08	0.10
8	The dispute was difficult to resolve	−0.19	**0.66**	−0.00	−0.13	0.01	−0.02	−0.21
Factor 3: *Relationship deterioration*								
15	Task conflict was turned into relationship conflict	−0.10	0.26	**0.76**	−0.17	−0.11	0.03	−0.17
13	I ignored the needs and expectation of the other party	−0.13	0.17	**0.69**	0.10	0.10	−0.08	−0.01
21	The negotiation process was a one-side decision-making process	−0.09	0.07	**0.56**	0.24	0.00	−0.44	0.23
14	Solution development was likely to be sub-optimal, resulting in wasted resources	−0.26	0.42	**0.55**	0.28	0.11	0.05	−0.01
Factor 4: *Inaction*								
6	I withdrew from a threatening situation	0.24	0.14	0.09	**0.81**	−0.19	−0.13	−0.02
5	The issue was postponed until a better time	−0.08	0.19	0.07	**0.75**	0.30	0.08	0.05
Factor 5: *Further disagreement*								
3	There were further disagreements or escalations in conflict	−0.00	0.26	−0.02	−0.08	**0.77**	−0.13	0.14
4	Stalemate was aroused	0.13	−0.04	0.08	0.19	**0.70**	−0.16	−0.27

(continued)

Table 11.5 (continued)

Item No.		Factors						
		I	II	III	IV	V	VI	VII
Factor 6: *Relationship maintained*								
9	Some of each party's needs were satisfied, but not all of them	−0.11	0.12	−0.08	0.05	−0.22	**0.82**	0.02
10	Relationship between the parties was kept in tact for future interaction	0.60	−0.15	0.04	−0.03	−0.03	**0.62**	0.16
Factor 7: *Conflict reduction*								
20	Less future disputes were likely made	0.22	−0.02	−0.02	0.10	0.08	0.09	**0.84**
17	The agreement was difficult to reach	0.02	0.34	0.09	0.16	0.33	0.11	**−0.60**

dysfunctional outcome (Rahim 1992) due to its negative impact on conflict. Factor 4 is described as Inaction. This negotiation outcome is characterised by withdrawal from and postponement of the negotiation process. Inaction is often undesirable (Rahim 1992), as chances of getting the dispute resolved would become remote. Factor 5 includes the outcomes of further disagreement after the negotiation and the dispute reaches a stalemate. This outcome identified as Further Disagreement, is the least a negotiator wants and clearly a dysfunctional negotiation outcome (Rahim 1992). Factor 6 includes more positive negotiation outcomes such as some of the needs of the parties are satisfied and further interaction is kept. This functional outcome is described as Relationship Maintained. Finally, Factor 7 is interpreted as Conflict Reduction as this is a lesser chance for future dispute, a functional outcome favoured by the disputants.

The development of taxonomies is summarised in Fig. 11.3. This figure is in fact the enhanced version of the conceptual model for this study (Fig. 11.3 refers). The result of first step analysis indicated that the ROCI-II is a reasonable tool to be used to measure negotiating styles. The taxonomies of negotiation outcome developed in this part of the study reduce the number of variables into more manageable numbers for investigating the relationships between these two dimensions (presented as a narrow). This is to be reported in the following section.

11.9 Step 5: The Relationships Between the Negotiating Styles and Negotiation Outcomes

The relationships between negotiating styles and negotiation outcomes were explored by the use of multiple regression analyses (MRA), a statistical technique that can be used to analyse the relationship between a single dependent variable and several independent variables (Hair et al. 1995). In this study, for each of the

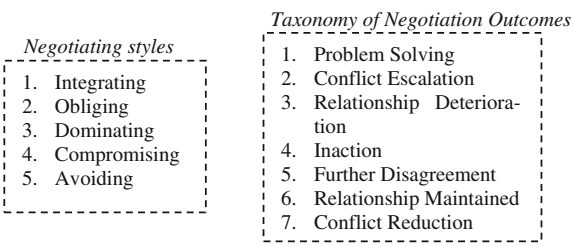

Fig. 11.3 The development of taxonomies

regression model, the dependent variable is one of the seven outcome taxonomies and the independent variables are the negotiating styles. Therefore, a total of seven regression models were developed. Based on the factors identified by the PCFA described in Step 3 and Step 4, factor scales were calculated for the purpose of the multiple regressions. These scales are the composite measure created for each observation on each factor extracted in the PCFA (Hair et al. 1995). Therefore, new sets of variables for each of the negotiation outcome taxonomies were calculated for the multiple regression analysis. In sum, the equation of the multiple regressions is in the following form:

$$O = a_0 + a_1S_1 + a_2S_2 + a_3S_3 + a_4S_4 + a_5S_5 \quad (11.1)$$

where O = Dependent variable (Taxonomy of Negotiation outcome); S_i = Independent variables (Negotiating styles).

As described in Step 4, the identification of the factors in the taxonomies is either functional or dysfunctional. For ease of discussion, the statistical results of these two types of negotiation outcomes are presented in Tables 11.6 and 11.7. In the tables, the R^2 values represent the combined effect of the entire variate in prediction and range from 0.144 to 0.504. Comparable results were reported by a number of similar studies in the study of self-reported conflict style (Oetzel 1998), organisational conflict styles (Gross and Guerrero 2000) and styles on buyer–supplier negotiations (Sharland 2001). The relative contribution of the negotiating styles towards the negotiation outcome can be compared by normalising the coefficients of the regression equation. The higher the normalised coefficient, the greater its contribution towards the prediction of the outcomes.

It appears that the use of obliging, dominating and avoiding styles are less influential in achieving functional negotiation outcome. Therefore, relying on the power position to control others, self-sacrifice and withdrawal from conflict does not mean that the conflict can be resolved. Using these types of negotiating style may even result in conflict escalation and relationship deterioration. More tedious and costly conflict resolution method may then become necessary (Cheung 1998; Hills 1992).

Generally, project practitioners are suggested to use integrating style in the conflict resolution process, as this style was found having positive contribution towards functional outcomes and negatively correlated with dysfunctional outcomes.

Table 11.6 Overall results of multiple regression analysis (for functional negotiation outcomes)

Dependent variables (Outcomes)	Independent variables (Negotiating styles)	R^2	Standardised regression coefficients	Normalised regression coefficients
Problem solving		0.306		
	Integrating		0.536	0.602
	Obliging		−0.083	0.093
	Dominating		0.143	0.160
	Compromising		0.012	0.013
	Avoiding		−0.117	0.132
Relationship maintained		0.504		
	Integrating		0.549	0.366
	Obliging		−0.192	0.128
	Dominating		−0.172	0.115
	Compromising		0.407	0.271
	Avoiding		−0.181	0.120
Conflict reduction		0.144		
	Integrating		0.318	0.250
	Obliging		0.168	0.133
	Dominating		−0.078	0.062
	Compromising		−0.424	0.335
	Avoiding		0.278	0.220

These can be shown from the results obtained by MRA as shown in Tables 11.6 and 11.7. In Table 11.6, the normalised regression coefficients of integrating style are 0.602, 0.366, and 0.250 for the three functional outcomes: problem solving, relationship maintained and conflict reduction respectively, which are the highest in magnitude among the other styles. These results suggested that use of integrating style contributes to problem solving and conflict reduction with improved relationship, an observation in line with findings in previous studies (Friedman et al. 2000, Gross and Guerrero 2000, Rahim et al. 2000). The integrating style, which locates at high concern for self as well as the other party, has also been described as problem solving, collaboration, cooperation, solution-orientation, win–win, or positive-sum style. The use of integrating style is also regarded as highly effective, as it provides the chance to address the other side's concerns and goals such that the disputing parties can strive for a win–win solution (Tutzauer and Roloff 1988). Furthermore, integrating style also carries two distinctive elements: consultation and problem solving (Prein 1976). Consultation involves open and direct communication to address a problem. Problem solving includes the ability to devise creative solutions. Therefore, this style emphasises the concerns of both parties by finding mutually acceptable solutions unique to the problem. This also involves active collaboration between the parties such as open exchange of information and examination of differences (Rahim et al. 2000). In sum, less conflict-laden environment can be formed using an integrating style and the exploration of mutual interests can result in creative and efficient outcomes (Fisher and Ury 1991). In experimental researches, this style has proved to be able to achieve the highest

Table 11.7 Overall results of Multiple Regression Analysis (for dysfunctional negotiation outcomes)

Dependent variables (Outcomes)	Independent variables (Negotiating styles)	R^2	Standardised regression coefficients	Normalised regression coefficients
Conflict escalation		0.234		
	Integrating		−0.180	0.195
	Obliging		−0.018	0.019
	Dominating		0.062	0.067
	Compromising		−0.172	0.186
	Avoiding		0.493	0.533
Relationship deterioration		0.303		
	Integrating		−0.624	0.459
	Obliging		0.045	0.033
	Dominating		0.267	0.197
	Compromising		0.255	0.188
	Avoiding		0.167	0.123
Inaction		0.229		
	Integrating		0.102	0.120
	Obliging		−0.077	0.090
	Dominating		−0.133	0.156
	Compromising		−0.018	0.021
	Avoiding		0.523	0.613
Further disagreement		0.462		
	Integrating		0.021	0.012
	Obliging		0.437	0.243
	Dominating		0.451	0.252
	Compromising		−0.643	0.358
	Avoiding		0.243	0.135

levels of joint gain for the negotiating parties (Ben Yoav and Pruitt 1984a, b; Pruitt et al. 1983). Reported field studies also showed that supervisors using an integrating style achieved more behavioural compliance with their requests (Rahim and Bonoma 1979) and a sign of low conflict level.

Incidentally, the concept of partnering is also based on the use of integrating style in project management. Moreover, the use of compromising style appears both correlated with functional and dysfunction outcomes. The results suggest that compromising style does not lead to further disagreement but the level of conflict is unlikely to be reduced. This was supported by Rahim and Bonoma (1979), who suggested that a moderate amount of conflict, handled in a constructive manner, is instrumental in attaining and maintaining an optimum level of organisational effectiveness. Hence, the use of compromising style to retain a little amount of conflict can actually be beneficial to the projects, provided that the dispute does not worsen. In this regard, compromising may therefore be regarded as a practical approach in resolving dispute (Rahim 1992).

The findings are supportive to the notion of contingent use of negotiating styles. It is interesting to note that the use of power, withdrawal and accommodation would not bring positive negotiation outcome. These results are similar to the suggestion of Follett (1940) who advocated the need for an integrative method (problem-solving) for managing organisational conflict and believed that other methods of handling conflict were ineffective in dealing with conflict. In terms of career and professional achievement, this may be the most important finding from the study.

The study employs the ROCI-II instrument to measure negotiating style. The instrument has been tested and uses of it have been widely reported (Friedman, et al. 2000; Hammock et al. 1990; Lee et al. 2003; Oetzel 1998; Rahim 1983; Rahim et al. 2000; Rahim 2002; Van De Vliert and Kabanoff 1990). Notwithstanding, styles obtained are based on self-evaluation by the negotiators and bias is possible. An alternative is to have data derive from observation. As dispute negotiations are mostly conducted privately, style identification through observation may not always be possible. This could well be used in another study where permissions of the disputants are obtained for observation. In such cases, dispute specific contextual factors such as type, magnitude or complexity of the dispute can also be taken into account.

11.10 Chapter Summary

The construction industry is perceived to be dispute laden. This can be attributed to many factors such as the lack of common goals, competing needs of the project team members, inequitable risk allocation, changes in construction plan and specification and contradictory and erroneous information. All these factors contribute to the germination and manifestation of construction disputes. Dispute is always negotiated first before other resolution methods are considered. During negotiation, characteristics specific to the disputants such as personality plays the key role in framing how the negotiation was conducted, hence the negotiation outcome. The interest in understanding the negotiating behaviours and negotiation outcomes is therefore immense. In this context, this chapter first gives a brief introduction of the traditions of negotiation studies, then discusses the causes of negotiation failure with emphasis on the behavioural dimensions and finally seeks to investigate the relationships between the negotiating styles and negotiation outcomes in a five-step process. Step 1 identifies a style classification framework from literature and selects a measurement tool. The Rahim Organisational Conflict Inventory-II (ROCI-II) that measures the five negotiating styles: integrating, obliging, avoiding, dominating and compromising portrayed by Blake and Mouton (1964, 1970), was selected for use in the study. Step 2 involved the use of a questionnaire to collect data. In Step 3, the authenticity of

ROCI-II was tested with the technique of Principal Component Factor Analyses (PCFA). ROCI-II appears to be a reliable and valid measure of negotiating styles. In Step 4, taxonomies of negotiation outcomes, three functional negotiation outcomes (problem solving, relationship maintained and conflict reduction) and four dysfunctional negotiation outcomes (conflict escalation, relationship deterioration, inaction and further disagreement) were identified. Based on these results, the final step of the study was to investigate the relationships between the negotiating styles and negotiation outcomes by conducting Multiple Regression Analyses (MRA). It is found that the use of obliging, dominating and avoiding styles appear to be less influential in achieving functional negotiation outcomes than using integrating style. The use of compromising style is also found to be a practical approach in resolving dispute. These findings are supportive to the notion of contingent use of negotiating styles.

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