

A Collaborative Interest Model of Relational Coordination: Examining Relational Norms as Actor Bonds

by

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Abstract

An important aspect of business-to-business marketing involves the development over time of privileged bonds between firms. Research has identified the complexity of such bonds and emphasised the need for closer scrutiny of the different mechanisms at work in successful and mutually beneficial business relationships.

Actor intention and actor bonds are structured as a complex amalgam of self and collective interest. Firms cooperate for self-interest and in that process generate relational norms whose structure can be represented as actor bonds.

In this study, a longitudinal input-process-output model of relationships is proposed. Input by firms motivated to create relationships is driven by the need to access customers or resources. This desire to operate in a relationship leads firms to coordinate themselves through a process whereby relational norms are developed and finally, output is achieved at a relationship level. That output is conceptualised at a relationship level recognises the emergent results of interaction, an essential reason for joining any relationship.

The model was empirically tested in the computer software industry with a survey of firms acting as principals and distributors in a number of existing distribution relationships.

Our findings, based on regression analysis, suggest that self and collective interest result in an intriguing blend of relational norms. The proposition that self-interest is not linked to trust and commitment is supported, suggesting that relational coordination is primarily based on collective interest. However, the proposition that flexibility is linked to both self and collective interest is also supported. This suggests that the degree of flexibility found in relationships may reflect the continuing need of balancing self and collective interests.

The final section of the paper proposes directions for future research on the intertwining of self and collective interest in relationships, along with their associations to actor bond structure that is configured as relational norms.

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Introduction

Business relationships operate through time with three aspects interacting (Håkansson and Snehota, 1995). First, firms interact with their relationship according to their intentions and self-interest. Second, the firms coordinate with each other within the relationship. Third, the relationship interacts with the wider network to arrive at strategic and performance outcomes for the relationship and so the participating firms.

Within the IMP Group it is argued that actors, resources and activities, collectively with their analogues at the relationship and network level, shape relationships and networks (Håkansson and Snehota, 1995). However, an alternate view is that actor intention and actor bonds, along with their reciprocal conditioning effects, are the most important factors shaping the long-term nature of interaction in networks of firms (Medlin and Quester, 1999). Briefly, actor bonds, actor intentions and their reciprocal 'conditioning' shape a firm's understanding of environmental events or change arising from the firms in the relationship. Furthermore, this interpretation of events informs on the optimal strategies and tactics available to the firm and the relationship in response to any change. Thus, the nature of the present relationship emerges from interaction between past actor bonds and firm intentions as well as consideration of future orientations of these aspects of relationships.

The pre-eminence of actor bonds, actor intentions and their reciprocal conditioning in explaining relationship and network dynamics leads to four implications. First, the attributes of actor bonds should be broadened to include other elements besides trust and commitment. Second, the concept of actor intention requires some elaboration, for relationships are inherently composed of an amalgam of self and collective interest (Young and Wilkinson 1997). Third, an explanation of the 'conditioning' effect of actor bonds and intentions on each other is required. Finally, examination of actor bonds and intentions requires a contextual setting that recognises their role in relationships.

The remainder of this paper is structured in the following manner. First, each of the implications suggested above is discussed. Second, a collaborative interest model of relational coordination based on a mixture of self and collective interest is proposed. Third, a methodology for examining the model is described and the results of hypotheses testing are presented. Finally, the areas for future research are reviewed.

Actor Bonds, Actor Intentions, Conditioning and Relationship Context

The interaction between firms' intentions and actor bonds presents a difficult matter for research, for each conditions the other. Thus, the first part of this section presents an account of 'conditioning' between firm intentions and actor bond formation, and this is followed by elaboration of each of these constructs. Finally, the fourth part of this section elaborates the need for examining actor intention and bonds in a relational coordination context.

Conditioning between Actor Bonds and Actor Intentions

The interaction of actor bonds and actor intentions for firms entering into relationships is a complex matter, for interaction involves not only the knowing actor (Giddens, 1979), but also the opportunity for emergence. The issue of emergence, how it occurs and definition of its

limiting and generative factors will naturally remain a continuing IMP research stream, however, it is not considered further here.

However, Giddens (1979) does provide an explanation of an element of the interaction process: namely, the coincidental formation of actor bonds from firms' intentions and the conditioning of intention by actor bonds. Thus, the structure of actor bonds is at once formed by the behaviour and intentions of the two firms, while concurrently providing a context for the firms' behaviour and intentions.

This elaboration of conditioning is based upon an important proposition, namely: the decision to act remains within the firms and follows their intentions and strategy. Thus, while actor bonds in a relationship provide additional options for tactics and strategy and network logic limits available tactics and strategy, it is the intention and behaviour of the firms that forms the actor bonds. If this is the case, then over the period of relationships it is the joint intentions of the firms that guide formation of actor bonds. The next part considers actor intentions in joining a relationship.

Actor Intentions

A business relationship represents a mutual alignment of self and collective interest (cf Bengtsson and Kock, 1999; Young and Wilkinson, 1997). Firms enter into relationships with suppliers, customers and significant partner organisations based on strategic plans (Axelsson and Easton, 1992; Ford, 1990). These strategic plans represent a *future orientation*, founded on the belief that long-term coordinated action with another firm is important. At the heart of this strategy is an interest in maintaining future exchange based on expected net gains (Dwyer, Schurr, and Oh, 1987). From a firm's perspective these gains need to be in the form of *economic goals*. Thus, a firm's self-interest is evident in the need for individual rewards as a basis for motivation to join a relationship and continue to interact; while collective interest is partially displayed by the way the other party mediates the collective rewards.

However, actor intentions alone do not limit a firm's ability to manage a relationship over-time for, as Giddens (1979) indicates, actors will have differing knowledge of their social context. Thus, a firm's *past experience* with acting collectively will also provide knowledge and skills that will shape the coordination process between the firms (Wilson, 1995). Furthermore, past experience of acting collectively must lead to formation of significantly different actor bonds.

Actor Bonds

To-date, actor bonds have been characterised by the attributes of trust and commitment (Håkansson and Snehota, 1995), yet these are but two of a range of attributes that may exist within actor bonds. Thus, research should seek to extend the ability to characterise actor bonds. Macneil's (Macneil, 1980) contractual exchange theory offers a way to broaden actor bond characteristics by providing a comprehensive approach to norms in market and non-market situations. Norms are defined as "patterns of accepted and expected sentiments and behaviour that are shared by members of an exchange system and have the force of social obligation or pressure" (Gundlach, Achrol, and Mentzer, 1995). As such, norms represent a social structure, with Macneil (1980) distinguishing between market norms and the relational norms required for on-going transactions. These relational norms, introduced shortly,

represent a social structure within a relationship and so offer a means to extend actor bond attributes.

However, two problems exist in applying relational norms in the actor bond context. First, Macneil (1980) was only concerned with separating non-market norms from those that operate in market situations, so it remains unclear how non-market norms might apply in relationships as compared to other non-market contexts such as contractual-hierarchies (Medlin, 2001). Considerable research remains before this problem may be resolved. However, the present study presumes that all of Macneil’s non-market norms may be applied to relationship contexts.

Second, there is considerable overlap of constructs (Wilson, 1995), so that it is difficult to introduce relational norm constructs without re-definition. Table 1 provides an overview of constructs by literature area and indicates their similarities, as well as displaying the constructs used in this study. The naming of constructs in this study follows first the IMP framework, then the inter-firm coordination literature and finally the terminology for relational norms. Thus, Macneil’s (1980) relational norm of ‘mutuality’ (see table 1) is equated to ‘trust’ based on the similarity of definitions, while the relational norm of ‘solidarity’ is associated with ‘commitment’. As there is no equivalent construct for the relational norm of ‘role integrity’, in either IMP or inter-firm literature, this construct retains Macneil’s (1980) term. Whereas, the relational norm of ‘propriety of means’ is operationalised as ‘flexibility’, for this link with the inter-firm literature has been previously made (Heide and John 1992). Similarly, ‘open communication’ has been previously operationalised in the inter-firm literature (Heide and John 1992). Finally, Macneil’s (1980) construct of ‘conflict harmonisation’ is retained, for by focusing on a proactive reduction of conflict Macneil (1980), this represents more than use of power and influence on behalf of self-interest.

Table 1: Comparison of Actor Bond, Relational Norm and Relational Constructs

Actor Bonds (Håkansson and Snehota, 1995)	Macneils’ Relational Norms (Macneil, 1980)	Inter-firm Coordination Processes (Many authors)	Study Constructs
Trust	Mutuality - degree to which partners focus on the benefits of the relationship as a whole over the long-term, rather than monitoring individual transactions for fairness (Kaufmann and Stern, 1988)	Trust - “confidence in an exchange partner’s reliability and integrity” (Morgan and Hunt, 1994)	Trust
Commitment	Solidarity - “a common belief in effective future interdependence” (Macneil, 1980)	Commitment - “on-going relationship with another is so important as to warrant maximum efforts at maintaining it”(Morgan and Hunt, 1994)	Commitment
None	Role Integrity the complexity with which activities are divided amongst the parties in a relationship (Macneil, 1980)	None	Role Integrity
None	Propriety of Means - multiple paths available to achieve any outcome when strong relationships develop	Flexibility - “expectations of making adjustments” (Heide and John, 1992)	Flexibility

None	Open Communication	Communication - expectation that each party will proactively provide information to the partner (Heide and John, 1992)	Communication
None	Conflict Harmonization	Influence, Use of Power (Boyle et al., 1992; Frazier, 1999; Gaski, 1986)	Conflict Harmonization

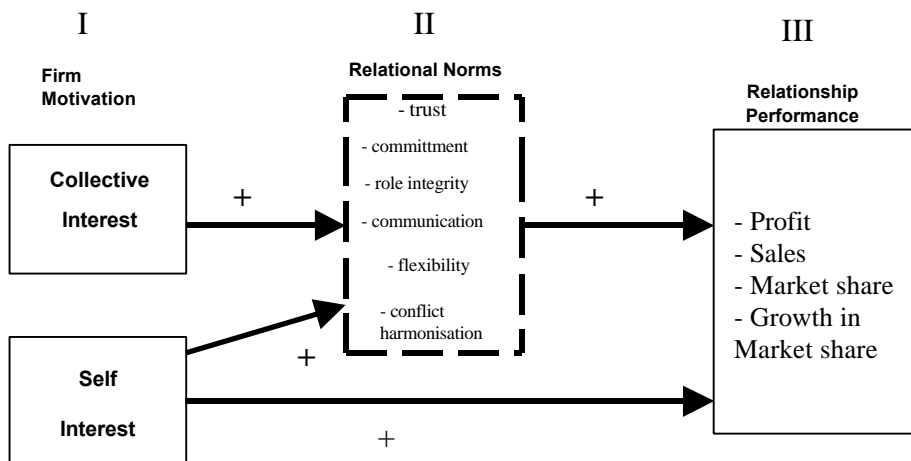
Relationship Context

The relational coordination process necessarily exists within a specific business context, where firms decide to work together to achieve results that neither could individually generate. That is a relationship strategy, through interaction and emergence, necessarily provides results that are either more, or less, than those anticipated by a single firm. This means that performance of a relationship strategy must be measured at the relationship level, for to measure the results at a firm level completely negates the purpose of the strategy. However, very rarely has past quantitative research of relational coordination constructs been based upon a relationship perspective (for some exception see Holm, Eriksson, and Johanson, 1996; Holm, Eriksson, and Johanson, 1999).

Collaborative Interest Model of Relational Coordination

The model of relational coordination presented here is composed of two sets of causal linkages (I to II, II to III) and two different levels of aggregation: firms and relationship (see figure 1). In the first section of the model (I), firms enter into business relationships to gain access to the resources and relationships of their partner firms (Håkansson and Snehota, 1995). These basic motivations represent both self and collective interest, while the success of a firm in accessing the resources of another depends in part on need, experience and ability in the relationship building process. Together the strengths of these motivations and abilities influence the extent of relational norm development within a specific dyad.

Figure 1: Collaborative Interest Model of Relational Coordination leading to Relationship Performance *



* Note: The model is at two distinct aggregation levels: Firms (ie actor intention) and Relationship (ie relational norms and performance).

In the second section of the model (II), inter-firm coordination processes and relational norms interact to provide the level of complexity and differentiation in time that is possible in a relationship. While actor bonds and encompassed relational norms are not the only element of inter-firm coordination, their overarching relationship level naturally provides for variations in the coordination response that firms can make to environmental change and change within the participating firms. Thus, relational norms act as mediating variables in explaining the performance of relationships (ie section III). Higher development of relational norms implies a more complex relationship and the potential to choose from a wider set of possible responses so that a firm and a relationship have the potential to be more successful.

It is important to note that sections I and II of the model represent different levels of aggregation, rather than different periods of time. Thus, sections I and II are coincident in time, but at firm and relationship levels of aggregation respectively. In contrast, relationship performance naturally represents an assessment over a period of time.

While it is clear that relational norms must develop from collective interest, the role of self-interest in relationships remains complex. As a first step, in elucidating what is likely to be a complex association, it is hypothesised that self-interest is positively linked to development of relational norms and relationship performance.

Methodology

The complex interaction between self and collective interest in relationships is examined in this study by operationalising collective interest as *future orientation* to the relationship and the level of *past experience* in relationships, while self-interest is operationalised as the *economic goal* of the firms in the target market. A firm’s economic goal is a measure distinct from that of relationship performance in the target market. Relationship performance recognises the results of joint action, whereas economic goal is focused on the intention of the firm in entering the relationship. Thus, the economic goals of the firm reflect the self-interest motive of the firm in entering a relationship, while performance is a measure of relationship outcome.

As a result of these operationalisations it is possible to present specific hypotheses for testing the collaborative interest model, according to the dependent variable (table 2 for relationship performance, table 3 for relational norms). No hypotheses are presented for ‘open communication’ or ‘conflict harmonisation’ as reliable indicators were not developed.

Table 2: Hypotheses for Relationship Performance

Hypotheses	Independent variable	Predicted Relationship	Dependent Variable
1 Hypothesis 1	Self-interest Economic goals	+	Relationship performance Relationship performance
Group 2 Hypothesis 2a Hypothesis 2b Hypothesis 2c Hypothesis 2d Hypothesis 2e	Relational Norms Trust Commitment Flexibility Role Integrity Trust, Commitment, Flexibility, Role Integrity	 + + + + +	Relationship performance Relationship performance Relationship performance Relationship performance Relationship performance Relationship performance

The methodology chosen to test this model involved a survey of computer software firms engaged in the export/import of business software using principal/distributor or principal/agent relationships. This sample was chosen as the software industry uses relationships and networks as the common modus operandi (Coviello, Ghauri, and Martin, 1998). A further benefit was the ease of measurement of relationship performance, the key dependent variable, as market boundaries were clear to all respondents.

Table 3: Hypotheses for Relational Norms

Hypotheses	Independent variable	Predicted Relationship	Dependent Variable
Group 3 Hypothesis 3a Hypothesis 3b Hypothesis 3c Hypothesis 3c	Self Interest Economic goal Economic goal Economic goal Economic goal	 + + + +	Relational Norms Trust Commitment Role Integrity Flexibility
Group 4 Hypothesis 4a Hypothesis 4b Hypothesis 4c Hypothesis 4d	Past Experience Past experience Past experience Past experience Past experience	 + + + +	Relational Norms Trust Commitment Role Integrity Flexibility
Group 5 Hypothesis 5a Hypothesis 5b Hypothesis 5c Hypothesis 5d	Future Orientation Future Orientation Future Orientation Future Orientation Future Orientation	 + + + +	Relational Norms Trust Commitment Role Integrity Flexibility

In an initial step, a comprehensive list of software exporting firms (312 Australian, 175 New Zealand) was obtained from a commercial database. A one-page facsimile was then used to identify those firms involved in any type of distribution arrangement, ranging from gentleman’s agreement to memorandums of understanding. This process resulted in a final list of 128 Australian/New Zealand firms identified as having relationships with Malaysian/Singaporean distributor/agent firms. Each firm in this sample was then contacted and the person responsible for managing the Malaysian/Singapore relationships was identified. The ability of the manager to be a key informant (Campbell, 1955) was established and a qualification process applied to collectively nominate the partner firm in the other country. Details of the manager on the other side of the relationship were also obtained. Surveys were finally mailed to the key informants in both firms. Eventually, information on 83 relationships (from 45 principals and 38 agents/distributors) were collected and analysed, representing a response rate of 32%. In this study, both sides of the principal/distributor relationship have been included, but the dyad data has not been matched.

Results and Discussion

Measurement scales were prepared for constructs as a first step before analysis. Factor analysis was conducted using the Maximum Likelihood method to reduce the number of indicators for each construct (see table 4). During these analyses, the constructs of ‘open communication’ and ‘conflict harmonisation’ were found un-admissible, as they represented more than one factor and did not meet the requirement of a multi-normal distribution

(Jöreskog and Sörbom, 1996). For hypotheses testing, the indicators for each construct are summed to provide a single measure.

The results of examining the hypotheses using regression analyses are presented in table 5. Hypothesis one was supported: economic goals explained 8.2% of variance in relationship performance ($p=0.009$). Thus, self-interest plays, as expected, some part in explaining relationship performance. Later results elucidate this association further.

Table 4: Factor Analysis Results

Construct (Source)	Indicator	Item	Loading
Past Experience (developed for study)	1	In our firm's past relationships, the parties have treated problems as joint rather than individual responsibilities.	0.810
	2	In the past we participated in relationships where the parties are willing to owe each other favours.	0.810
Future Orientation (Ganesan 1994)	1	We believe that over the long term our relationship with this partner will be profitable.	0.942
	2	Maintaining a long-term relationship with this partner is important to our firm.	0.942
Economic Goal (developed for study)	1	For each goal (Market Share) indicate the relative importance to your firm's overall strategy with regard to the focus relationship.	0.975
	2	For each goal (Market Share Growth) indicate the relative importance to your firm's overall strategy with regard to the focus relationship.	0.975
Trust (Larzelere and Huston 1980; Rodriguez and Wilson 1995)	1	The other party is truly sincere in their promises.	0.926
	2	The other party can be trusted to meet their obligations to the partnership.	0.940
	3	Our partner is perfectly credible.	0.907
Commitment (Aulakh et al. 1997; Holm et al. 1996)	1	Our firm and the partner firm are very committed to each other.	0.944
	2	The partner firm is very committed to our firm.	0.944
Role Integrity (Kaufmann and Stern 1988)	1	The exchange relationship with the partner firm has created a complex web of interactions over all kinds of issues.	0.939
	2	The exchange relationship with the other party is extremely complicated.	0.887
	3	The exchange relationship with the partner firm has created a complex web of interactions between us.	0.937
Flexibility (Heide and John, 1992)	1	The parties expect to be able to make adjustments in the ongoing relationship.	0.980
	2	The parties expect to be able to make adjustments to cope with changing circumstances.	0.980
Relationship Performance (Holm et al. 1996)	1	Consider all the costs and revenues with the focus relationship. Relative to your firm's expectations in the focus market, what has been the performance of the inter-firm relation on Market Share.	0.985
	2	Consider all the costs and revenues with the focus relationship. Relative to your firm's expectations in the focus market, what has been the performance of the inter-firm relation on Market Share Growth.	0.985

Table 5: Regression Analyses results of Hypotheses One to Five

Sub Model A *					
<i>Hypotheses</i>	<i>Dependent Variable</i>	<i>Independent Variable/s</i>	<i>R2</i>	<i>Stand β</i>	<i>Signif</i>
Hypothesis 1	Relationship performance	Economic goals	0.082	0.287	0.009
Hypothesis 2a	Relationship performance	Trust	0.241	0.491	0.000
Hypothesis 2b	Relationship performance	Commitment	0.254	0.504	0.000
Hypothesis 2c	Relationship performance	Role Integrity	-0.012	-0.022	0.845
Hypothesis 2d	Relationship performance	Flexibility	0.068	0.261	0.017
Hypothesis 2e	Relationship performance	Trust	0.305	0.310	0.006
		Commitment		0.337	0.003
		Role Integrity		0.004	0.965
		Flexibility		0.132	0.166
Sub Model B *					
<i>Hypotheses</i>	<i>Dependent Variable</i>	<i>Independent Variable/s</i>	<i>R2</i>	<i>Stand β</i>	<i>Signif</i>
Hypothesis 3a	Trust	Economic goal	-0.004	0.093	0.404
Hypothesis 3b	Commitment	Economic goal	0.034	0.183	0.097
Hypothesis 3c	Role Integrity	Economic goal	0.080	0.282	0.010
Hypothesis 3d	Flexibility	Economic goal	0.054	0.232	0.035
Hypothesis 4a	Trust	Past experience	0.028	0.200	0.070
Hypothesis 4b	Commitment	Past experience	0.135	0.381	0.000
Hypothesis 4c	Role Integrity	Past experience	0.003	0.057	0.609
Hypothesis 4d	Flexibility	Past experience	0.040	0.227	0.039
Hypothesis 5a	Trust	Future Orientation	0.175	0.430	0.000
Hypothesis 5b	Commitment	Future Orientation	0.280	0.537	0.000
Hypothesis 5c	Role Integrity	Future Orientation	0.006	0.075	0.498
Hypothesis 5d	Flexibility	Future Orientation	0.191	0.449	0.000

* Hypotheses are considered according to dependent variable: Model A – Relationship Performance, Model B – Relational Norms

In the second group of hypotheses trust and commitment (hypotheses 2a, 2b) explained 24.1% and 25.4% of relationship performance respectively ($p=0.000$ and $p=0.000$). This is consistent with past research (Ganesan, 1994; Håkansson and Snehota, 1995; Morgan and Hunt, 1994).

However, the result concerning hypothesis 2c is interesting: no association was found between role integrity and relationship performance. This is contrary to Macneil's (1980) theory of relational norms and, as such, is worthy of note. That role integrity is not significantly correlated with trust, commitment, flexibility or relationship performance (see appendix A) means that it may not play a part in the collaborative interest model of relational coordination.

The association between flexibility and relationship performance (hypothesis 2d) was found to be positive and significant. However, only 6.8% of relationship performance variance was explained by flexibility. Given that flexibility is correlated with economic goals and commitment (see appendix A), this result suggests that flexibility is likely to influence

relationship performance through some other mediating variable. The result concerning hypothesis 2e further supports this inference.

Hypothesis 2e examines how the relational coordination constructs, in aggregate, explain relationship performance. This was tested using stepwise-multiple regression, with variables added and removed from analysis in steps according to their probability of F statistic (Coakes and Steed, 1999). The result of this analysis was the removal of role integrity and flexibility, so that trust and commitment remained to explain 30.5% of the variance in relationship performance ($p=0.006$ and $p=0.003$ respectively). Thus, trust and commitment together explained more variation in relationship performance, than either of the two alone. Furthermore, the removal of flexibility adds weight to the argument that its impact upon relationship performance is mediated by other variables.

Group three hypotheses examine the role of economic goals upon the relational norm constructs. No significant association was found between economic goals and trust or commitment, suggesting that self-interest does not directly influence the development of these two central constructs of relational coordination.

However, economic goals explained 8% of variance of role integrity ($p=0.010$). This, in conjunction with previous results, suggests that the role integrity construct and/or related theory require further examination. That role integrity is associated with the self-interest of the firm, may also suggest that integration is only carried as far as needed to achieve the firm's ends. If this is so, then role integrity is not part of relational coordination.

With regard to the association between economic goals and flexibility (Hypothesis 3d) a significant result is found ($p=0.035$), but with only 5.4% of variance explained. That this association is significant is important, however, for it appears to indicate that flexibility is aligned with self-interest. Thus, firms are flexible when they need to be, rather than as a means of pursuing joint interest.

Group four hypotheses examine the role of past experience with joint action upon the development of relational norm. Hypothesis 4a was unsupported. Past experience with joint action does not lead to trust in the present relationship. On the other hand, testing of Hypothesis 4b found a significant and positive association between past experience and commitment to the present relationship, with 13.5% of variance being explained ($p=0.000$). This provides empirical evidence for Wilson's (1995) suggestion that level of experience influences the ability of parties to form relationships.

Testing of Hypothesis 4c found no significant association between past experience and role integrity. Thus, it appears that experience with past joint action, contrary to theoretical expectations, does not lead to higher levels of integration in the present relationship. For past experience and flexibility (Hypothesis 4d) only a weak association was found. This result suggests that past experience with joint activity in other relationships has only a marginal influence on flexibility in the current relationship.

Group five hypotheses examine the role of future orientation (ie the strategic importance of the relationship) upon the relational norm constructs. Hypothesis 5a is supported with 17.5% of variance in trust explained by future orientation ($p=0.000$). The importance of future orientation upon the development of commitment (hypothesis 5b) is also significant ($p=0.000$), with 28% of variance in commitment being explained.

Testing of Hypothesis 5c found no significant association between future orientation and role integrity. This is surprising for one would expect the importance of a relationship strategy to lead to higher levels of role integrity between two firms. This is an important result, especially given the association between role integrity and economic goals. It suggests that the role integrity construct and the related theory deserve closer attention. One possibility is that role integrity is associated with forms of hierarchical coordination.

With regard to the association between future orientation and flexibility (hypothesis 5d) a significant result was found ($p=0.000$) with 19.1% of variance explained. This is interesting when considered in conjunction with the previously discussed association between economic goals and flexibility. Together, these results suggest that flexibility is a consequence of self-interest and the importance of the relationship to the firm.

In conclusion, the proposition that future orientation leads to higher levels of relational norm development is supported with regard to development of trust, commitment and flexibility. This is an important result: future orientation is clearly found to be an antecedent of the two known relational coordination variables: trust and commitment. However, as flexibility is not associated with trust and the association with commitment is significant, but not strong, this result in conjunction with support for Hypothesis 3c tends to suggest that flexibility is linked more closely with self-interest or is an antecedent of relational coordination. If flexibility is more closely aligned with self-interest then it is not an element of relational coordination.

The next part of this section summarises these results by conducting path analyses between self and collective interest constructs and relationship performance.

Path Analysis

Path analysis allows comparison of linked causal paths. This is achieved by multiplying the coefficients of constructs found to be significant in causal paths (Asher, 1976). Table 6 presents the indirect coefficients for the causal paths explaining relationship performance. These results may be summarised by dichotomising relational coordination based on collective interests with coordination based on self-interest. Thus, paths with either trust or commitment represent relational coordination, while all other paths would indicate coordination based on self-interest. With this interpretation, relational coordination (shaded in table 6) is clearly more important in explaining relationship performance than is self-interest.

Table 6: Indirect Coefficients for Main Causal Paths to Relationship Performance

Causal Path	Indirect coefficient
Future orientation ---> Trust ---> Relationship performance	0.211
Future orientation ---> Commitment ---> Relationship performance	0.271
Past experience ---> Commitment ---> Relationship performance	0.192
Past experience ---> Flexibility ---> Relationship performance	0.059
Future orientation ---> Flexibility ---> Relationship performance	0.117
Economic goal ---> Flexibility ---> Relationship performance	0.061

Discussion

These results indicate for the first time the relative importance of relational coordination vis-à-vis coordination based on self-interest in the structuring of relationships, indicating that future research should continue to focus on the role of trust and commitment in relationships.

One of the most interesting results in relation to testing the collaborative interest model is the more complex association between flexibility and the constructs for self-interest, future orientation and relationship performance. First, that the level of a firm's future orientation to a relationship, and economic goals, leads to greater flexibility seems to indicate a role for this construct in balancing of self and collective interest. Further, that a greater proportion of variance in flexibility is explained by future orientation than by economic goals (19.1% compared to 5.4%) seems to suggest that flexibility is more closely related to self-interest that is embedded within collective interest. Yet, flexibility does not add significantly to the explanation of relationship performance when included in a regression analysis alongside commitment and trust. This would seem to indicate that flexibility might be related to some other aspect of relationship performance, possibly at a firm or strategic level. This points to a need for future research to account for a firm and relationship perspective, where self and collective interest provide two complementary elements of relational coordination.

Future research

Future research using the collaborative interest model of relational coordination must naturally be composed of two inter-locking issues: self-interest and collaborative interests. The first issue should see the self-interest aspect of relationships developed beyond the simple association between economic goals, flexibility and relationship performance portrayed in this study. This would involve elucidation of the ways that resource ties and activity links respond to different sets of actor intentions and actor bonds. In addition, the self-interest aspect of relationships may also involve the conflict harmonisation construct as the mediator of self and collective interest.

Conversely, the second issue requires elaboration of the linkages between trust, commitment and relationship performance. Presumably, this research will result in the integration of resource ties and activity links into the collaborative interest model, for it seems that interaction between these relationship elements must explain relationship performance. However, the argument and research evidence presented here suggests that resource ties and activity links must be examined on the basis of both self and collective interest, if their interaction is to be understood.

The possibilities in this program of future research suggest that the concepts of self and collective interest within a collaborative interest model of relationships, where performance is conceptualised at a dyadic and also firm level, may offer important insights into the operation and management of business relationships.

Appendix A: Correlation Matrix of Final Indicators

		P_EXP	F_ORIENT	GOAL	TRUST	COMM	R_INT	FLEX	PERF
P_EXP	Pearson Correlation	1.000	.294 **	-.033	.200	.381 **	.057	.227 *	.082
	Sig. (2-tailed)	.	.007	.765	.070	.000	.609	.039	.461
	N	83	83	83	83	83	83	83	83
F_ORIENT	Pearson Correlation	.294 **	1.000	.374 **	.430 **	.537 **	.075	.449 **	.461 **
	Sig. (2-tailed)	.007	.	.001	.000	.000	.498	.000	.000
	N	83	83	83	83	83	83	83	83
GOAL	Pearson Correlation	-.033	.374 **	1.000	.093	.183	.282 **	.232 *	.287 **
	Sig. (2-tailed)	.765	.001	.	.404	.097	.010	.035	.009
	N	83	83	83	83	83	83	83	83
TRUST	Pearson Correlation	.200	.430 **	.093	1.000	.539 **	-.146	.180	.491 **
	Sig. (2-tailed)	.070	.000	.404	.	.000	.188	.103	.000
	N	83	83	83	83	83	83	83	83
COMM	Pearson Correlation	.381 **	.537 **	.183	.539 **	1.000	.057	.242 *	.504 **
	Sig. (2-tailed)	.000	.000	.097	.000	.	.606	.027	.000
	N	83	83	83	83	83	83	83	83
R_INT	Pearson Correlation	.057	.075	.282 **	-.146	.057	1.000	-.056	-.022
	Sig. (2-tailed)	.609	.498	.010	.188	.606	.	.616	.845
	Sig. (2-tailed)	.609	.498	.010	.188	.606	.	.616	.845
	N	83	83	83	83	83	83	83	83
	N	83	83	83	83	83	83	83	83
FLEX	Pearson Correlation	.227 *	.449 **	.232 *	.180	.242 *	-.056	1.000	.261 *
FLEX	Pearson Correlation	.227 *	.449 **	.232 *	.180	.242 *	-.056	1.000	.261 *
	Sig. (2-tailed)	.039	.000	.035	.103	.027	.616	.	.017
	Sig. (2-tailed)	.039	.000	.035	.103	.027	.616	.	.017
	N	83	83	83	83	83	83	83	83
	N	83	83	83	83	83	83	83	83
PERF	Pearson Correlation	.082	.461 **	.287 **	.491 **	.504 **	-.022	.261 *	1.000
PERF	Pearson Correlation	.082	.461 **	.287 **	.491 **	.504 **	-.022	.261 *	1.000
	Sig. (2-tailed)	.461	.000	.009	.000	.000	.845	.017	.
	Sig. (2-tailed)	.461	.000	.009	.000	.000	.845	.017	.
	N	83	83	83	83	83	83	83	83

** Correlation is significant at the 0.01 level * Correlation is significant at the 0.05 level.

Bibliography

- Asher, Herbert E. (1976), *Causal Modelling*, Beverly Hills, CA.: Sage Publications.
- Axelsson, B. and G. Easton, eds. (1992), *Industrial Networks: A New View of Reality*, New York: Routledge.
- Bengtsson, M. and S. Kock (1999), "Co-operation and Competition in Relationships Between Competitors and Business Networks," *Journal of Business & Industrial Marketing*, 14 (3), 178-194.
- Boyle, Brett, F. Robert Dwyer, Robert A. Robicheaux, and James T. Simpson (1992), "Influence Strategies in Marketing Channels: Measures and Use in Different Relationship Structures," *Journal of Marketing Research*, XXIX (November 1992), 462-473.
- Campbell, Donald T. (1955), "The Informant in Quantitative Research," *American Journal of Sociology*, 60 (January 1955), 339-43.
- Coakes, Sheridan J. and Lyndall G. Steed (1999), *SPSS: Analysis without Anguish*, Brisbane: Jacaranda Wiley Ltd.
- Coviello, Nicole E., Pervez N. Ghauri, and Kristina A-M. Martin (1998), "International Competitiveness: Empirical Findings from SME Service Firms," *Journal of International Marketing*, 6 (2), 8-27.
- Dwyer, Robert F., Paul H. Schurr, and Sejo Oh (1987), "Developing Buyer-Seller Relationships," *Journal of Marketing*, 51 (April 1987), 11-27.
- Ford, D., ed. (1990), *Understanding Business Markets: Interaction, Relationships and Networks*, London: Academic Press.
- Frazier, Gary L. (1999), "Organizing and Managing Channels of Distribution," *Journal of the Academy of Marketing Science*, 27 (2), 226-240.
- Ganesan, Shankar (1994), "Determinants of Long-Term Orientation in Buyer-Seller Relationships," *Journal of Marketing*, 58 (April 1994), 1-19.
- Gaski, John F. (1986), "Interrelations Among a Channel Entity's Power Sources: Impact of the Exercise of Reward and Coercion on Expert, Referent, and Legitimate Power Sources," *Journal of Marketing Research*, XXIII (February 1986), 62-77.
- Giddens, A. (1979), *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*, Berkley, CA: University of California Press.
- Gundlach, Gregory T., Ravi S. Achrol, and John T. Mentzer (1995), "The Structure of Commitment in Exchange," *Journal of Marketing*, 59 (January 1995), 78-92.
- Håkansson, Håkan and Ivan Snehota, eds. (1995), *Developing Relationships in Business Networks*, International Thomson Business Press.
- Heide, Jan B. and George John (1992), "Do Norms Matter in Marketing Relationships?," *Journal of Marketing*, 56 (April 1992), 32-44.
- Holm, D.B., K. Eriksson, and J. Johanson (1996), "Business Networks and Cooperation in International Business Relationships," *Journal of International Business*, 27 (5 (Special Issue Sup)), 1033-1053.

- Holm, D. B., K. Eriksson, and J. Johanson (1999), "Creating Value through Mutual Commitment to Business Network Relationships," *Strategic Management Journal*, 20 (5), 467-487.
- Jöreskog, K.G. and Dag Sörbom (1996), *Lisrel VIII*, Chicago: SSI.
- Kaufmann, Patrick J. and Louis W. Stern (1988), "Relational Exchange Norms, Perceptions of Unfairness, and Retained Hostility in Commercial Litigation," *Journal of Conflict Resolution*, 32 (September 1988), 534-552.
- Macneil, Ian R. (1980), *The New Social Contract: An Inquiry into Modern Contractual Relations*, New Haven: Yale University Press.
- Medlin, C.J. (2001), Relational Norms and Relationship Classes: From Independent Actors to Dyadic Interdependence. Adelaide University: Unpublished Phd Thesis.
- Medlin, C.J. and P.G. Quester (1999), "Actor Bonds and Relational Norms in Networks," *Proceedings: 15th Annual IMP Conference*, Dublin: .
- Morgan, Robert M. and Shelby D. Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58 (July 1994), 20-38.
- Wilson, David T. (1995), "An Integrated Model of Buyer-Seller Relationships," *Journal of the Academy of Marketing Science*, 23 (4, 1995), 335-346.
- Young, Louise C. and Ian F. Wilkinson (1997), "The Space Between: Towards a Typology of Interfirm Relations," *Journal of Business-to-Business Marketing*, 4 (2, 1997), 53-97.