

Accounting for the alignment of interest and commitment in interfirm transactional relationships

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Abstract

Control in interfirm transactional relationships has, inter alia, the purpose of mitigating potential opportunistic behaviour. For an individual actor the power-base to exercise control over the (output of) the behaviour of another actor in the relationship is a contractual arrangement. From a contractual perspective control systems are designed, thus providing contractual instruments to align interests and to prevent future opportunistic behaviour from occurring. Transaction cost economics proves to be a powerful tool for designing these instruments, which from this theoretical perspective are based on 'credible commitments' and 'credible exit threats'. The paper argues that the design and potential use of these instruments are efficient in the presence of the legitimate mistrust for which they have to compensate.

However, given fundamental uncertainty, these designs do not suffice in attenuating opportunism and have to be complemented by trust building. Drawing on insights from cognitive social psychology and sociology, the paper clarifies that in self-regulating processes of rational interaction guided by a principle of enlightened self-interest, trust is built via mutual relational signalling. Partners voluntarily and deliberately signal to each other that they are trustworthy. The paper argues and gives evidence that instrumental control system design embedded in an institutional environment and atmosphere is a necessary flank for a trust building process to work properly.

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1. Introduction

Ever since Otley observed that “the scope of the activity of management control is enlarged and it no longer confines within the legal boundaries of the organization” (Otley, 1994, p. 293) and Hopwood urged “the examination of some of the accounting and informational consequences of more explicit concerns with the management of the supply chain and a more conscious questioning of what activities reside within and without the enterprise” (Hopwood, 1996, p. 590) a number of studies have been conducted: e.g. Franses & Garnsey, 1996; Gietzmann, 1996; Seal et al., 1999; Van der Meer-Kooistra & Vosselman, 2000; Anderson, Glenn & Sedatole, 2000; Mouritsen, Hansen & Hansen, 2001; Tomkins, 2001; Dekker, 2003; Van den Boogaard & Speklé 2003; Langfield-Smith & Smith, 2003; Seal, Berry & Cullen, 2004; Hakansson & Lind, 2004; Cooper & Slagmulder, 2004; Dekker, 2004.

From different perspectives these studies examine the roles of accounting, control and trust in interfirm transactional relationships. For instance, performance measurement and management systems, sanction budgeting, target costing and open book accounting have been proved to play more or less important roles in collaborative partnerships and long-term interfirm relationships. Accounting serves coordination requirements as well as appropriation concerns (Dekker, 2004), the latter being associated with potential *opportunism* in transactional relationships. In a similar vein, most of the studies indicate that trust (in many different forms and stemming from many different sources) is at least of some importance. In uncertain situations where it is difficult to plan the required activities and output and measure the realized activities and output, relying on a trustworthy relationship becomes more important (Van der Meer-Kooistra and Vosselman, 2000; Tomkins, 2001).

However, until now the studies fail to fully explore the way in which trust is built at the level of the relationship (the *how* of the trust building process), and, more importantly, the role that accounting information plays in this process. Furthermore, although the links between trust, (accounting) information and control have been questioned (e.g. Tomkins, 2001; Langfield-Smith and Smith, 2003; Dekker, 2004) there is hardly any theory on how formal controls relate to trust building *processes*.

This paper contributes to the existing knowledge by trying to fill up this research gap. Concentrating on the potential functions of accounting information, control and trust in mitigating opportunism, it makes a clear distinction between a contractual perspective from which contractual instrumental design (embedded in a wider institutional environment and atmosphere) as a base for the use of control systems is illuminated and a process perspective from which self-regulating, cognitive trust building processes become visible. We argue that in practice instrumental design and self-regulating processes are not substitutes for each other, but that instrumental design necessarily has to ‘flank’ trust building processes. Instrumental design in combination with safeguards in the wider institutional environment has to compensate for legitimate mistrust; once the right instruments are in place, the right cognitive ‘frames’ of the partners can induce a level of trust that impedes opportunism to emerge in the course of the relationship. Particularly, the role of accounting in trust building processes is examined. Moreover, we explore how this trust building process relates to the more formal accounting and control systems as they are designed in a contractual realm.

The paper is organized as follows. In a second section by drawing on new institutional economics we will provide a deeper theoretical understanding of instrumental design of controls in interfirm transactional relationships. Transaction cost economics (TCE) offers a comprehensive framework for (the understanding of) an efficient design of controls and governance structures. In a third section the usefulness of a TCE-analysis for the understanding of the roles of accounting in controlling an interfirm relationship is clarified by making reference to the extant management accounting literature.

However, TCE has been criticised for its underemphasis on process (e.g. Ghoshal and Moran, 1996; Mahnke, 2001). Given uncertainty and complexity, it is acknowledged that an understanding of decision *procedures* as they *gradually* show through actors' behaviours is essential. Therefore, in a fourth section the paper addresses the questions as to why and how a rational actor deliberately and voluntarily copes with temptations for opportunistic behaviour *as they emerge in the course of the relationship*. Furthermore, this section clarifies the mechanism by which an actor is stimulated to signal his non-opportunistic behaviour to other actors in the relationship, thus signalling trustworthy behaviour. In doing so it will explain that trust is built in self-regulating interactive processes. In a fifth section the role of accounting in trust building is theorized and evidence on the role of accounting in trust building is given. This evidence is drawn from case studies presented in the existing accounting literature.

Next, a sixth section explores linkages between instrumental design as it is embedded in an institutional environment and atmosphere at the one hand and trust building at the level of the relationship at the other hand. Furthermore, it relates instrumental design and trust building to operational control. In a seventh section we explain and refine our main case proposition regarding the roles of accounting in the management control of interfirm transactional relationships. Furthermore, the main contributions to the development of a more general 'theory of the interaction between trust and information' (Tomkins, 2001) are outlined. Finally, some overall conclusions are drawn and a discussion is raised.

2. A new institutional economics perspective: an instrumental design approach towards opportunism

Contractual arrangements form a power-base for the use of management control systems in a transactional relationship. Transaction cost economics (TCE) as an important branch of new institutional economics offer a sound theoretical base for a contractual perspective on the management control of interfirm transactional relationships. Swierenga and Waterhouse (1982), Spicer and Ballew (1983) and Spicer (1988) were among the first to introduce transaction cost economics in the management control discipline. Recently Speklé (2001) explored the (potential) contribution from TCE to the understanding of management control in a broad sense (within as well as between organisations). He proposes "a framework that explicates the link between various archetypical configurations of control devices and the activities they are expected to control" (Speklé, 2001, p. 419). Covaleski *et. al* (2003) extend the contribution of transaction cost economics within the management control literature. While acknowledging that an important focus of TCE is on informing control structure choice that serves purposive control over transactions in (and between) organizations, their analysis emphasises the significance of changes in the institutional environment on purposive control structure choice. From these papers it follows that both the characteristics of the transactional relationships and the (changes in the) institutional environment play their roles in purposive control structure choice.

In this paper we will particularly draw on Williamson's important contributions to TCE (Williamson, 1985; 1993; 1996; 2000). One of the central notions in his analysis is opportunism. According to Williamson actors in a transactional relation could behave opportunistically. When

they do so, they are 'seeking self-interest with guile' (Williamson, 1985, p. 46). Opportunism is associated with behavioural risks: the willingness to lie, to cheat and to harm the other. Transaction cost economics assumes that these behavioural risks can be calculated beforehand. Subsequently, out of a set of known instruments or solutions a choice can be made in advance, in order to mitigate these behavioural risks. These instruments or solutions will be described in the contract in order to prevent opportunistic behaviour from occurring. So, the possibility of opportunism from the side of the other party is a *risk* that can be calculated beforehand. To the extent that parties do not think it economically justified to design contractual solutions for calculable potential opportunism they apparently decide to trust each other (Coleman, 1990). In this view, trust is an asset, which is conceived as *accepted calculated risk*; the potential benefits of expected cooperative behaviour exceed potential costs of expected opportunism (Gambetta, 1988; Coleman, 1990). Calculated risk is subordinate to self-interest: an actor will trust his interaction partner when he estimates that it is in his partner's interest to respect the agreement, and he honours his partner's trust because it is in his interest to do so. In Williamson's opinion (Williamson, 1993) this notion of trust is redundant, because it adds nothing to the more precise concept of 'calculated risk'. He suggests a moratorium on the term in the domain of economic transactions which are calculative and governed by self-interest and to only use it in the domain of personal ties, where trust occurs in a 'deep' sense of 'human passion' (Dunn, 1988, p. 74) and where it tries to suppress calculativeness. So, in Williamson's opinion trust and calculativeness belong to distinct relational areas.

Risks of opportunism can take various forms.

First, there is a risk of *opportunistic entry* to the transactional relationship. The potential supplier can, for instance, give wrong or imprecise information about his competencies or his past experiences, while the potential buyer can give wrong or imprecise information about the conditions under which the supplier has to perform.

Second, there is a risk of *opportunistic execution* of the agreement. A scenario used by Williamson may serve as an example. Suppose a transactional relation in which the supplier has to invest in specific assets lasts at least for two periods. In the first period the contracts are written, the orders are placed and the transaction-specific investments are made. The production is in the second period, the supplier will start production after the buyer confirms the order and realizes his demand. It is clear that in such a situation the supplier would like a hostage (a compensation) to be agreed upon before the agreement is made, given the necessity to invest in specific assets and the uncertainty of the buyer not realizing his demand. He would not think it is fair to bear all the risks. There are three possibilities: either the buyer refuses to give hostages, then the case is closed; or he is willing to post a hostage and an agreement is made; or he promises to keep his word, without posting a hostage, in which case the supplier will run a severe risk of potential opportunism.

Third, there is the risk of a *private use of confidential information*. Suppliers might realistically fear a spillover-effect: the buyer could leak their know-how via his network to the supplier's competitors (Blumberg, 2001). On their parts, buyers might fear the emergence of new competitors (Blumberg, 2001). Quinn and Hilmer (1994, p. 89) give the example of the US bike manufacturer Schwinn who outsourced its frame manufacturing to *Giant*, a then relatively unknown supplier of frames. After acquiring the knowledge necessary to produce frames, Giant decided to become a bike manufacturer itself and thus to become a competitor of Schwinn, who never grew out of its marginal role.

Fourth, there is a risk of an *opportunistic exit from the transactional relationship* (Blumberg, 2003). As Blumberg (2001) referring to Stafford (1994) is suggesting, an opportunistic exit from an alliance can, for instance, occur when one of the parties does not think it to be in his own interest if the other party chooses to also enter in transactional relationships with parties that are considered to be competitors of the leaving party.

The creation of a power-base for preventing various forms of opportunistic behaviour from occurring (i.e. a contractual arrangement) *not only* presupposes the *ability* to anticipate behavioural risks. It also presupposes the actors' *willingness* to create such a power-base. Rational actors considering entering a long-term economic relationship have to find it reasonable that potential solutions are written down. They should experience *reasonable fears* that out of the *pursuit of well-understood self-interest* potential partners will behave opportunistically and, therefore, will take economic advantage of the relationship. Therefore, an 'ex ante' mistrust of certain implicit or explicit promises of an actor (such as in the example given above) involved could be *legitimate*. More generally speaking, mistrust is legitimate when *third parties* that do not hold any stake in the relationship would say that any person put in the specific situation would mistrust certain explicit or implicit promises made by one of the parties. This is irrespective of the 'true' intention of the promisor when he makes his promise, as it is "blatantly against his self-interest" (Lindenberg, 2000, p. 12). The mistrusting party then can claim the necessity of putting in position instruments that foster mutual cooperation by reducing opportunities and incentives for opportunism and/or by compensating a firm's loss if opportunism nevertheless occurs, without running the risk of being accused of abnormal risk aversion or lack of good faith (Lindenberg, 2000, p. 12).

An explicit design and potential use of instruments that safeguard against opportunism that can be anticipated in advance does not in any way harm the relationship and is even desirable, because it fosters mutual cooperation. As the legitimacy of the instruments is directly connected to the pursuit of well-understood self-interest, the instruments aim at *interest alignment*, a process in which "incentives are changed in such a way that breach would not be blatantly in the self-interest of the promisor" (Lindenberg, 2000, p. 12). Within transaction cost economics, alignment of interest is to a great extent taken care of by credible commitments (Williamson, 1983).

Weesie and Raub (1996) classify credible commitments into four categories. First, actors can decide to shift control to third parties, who do not have an incentive to behave unfairly to either one of the actors involved. In doing so, actors commit themselves to arbitration in the case of a conflict. Second, actors can restrict their own set of behavioural alternatives. Examples of these are secrecy agreements as well as exclusivity assurances such as the guarantee not to enter the home market of the partner (Blumberg, 2001, p. 827). Third, actors can balance information asymmetries. The more informed actor provides (unrestricted) access to his information sources such as financial information systems. Fourth, actors can decide to modify the costs and benefits associated with certain behaviour. For instance, they can decide that a contractor acting in the interest of the outsourcer gets a financial bonus, whereas acting against the interest of the outsourcer, for instance, by delayed or poor performance, results in a financial penalty.

The specific instruments for which actors opt can be written down in a contract. Contractual clauses enable each actor to commit each other to partial control by other actors (Chung, 1995; Ghemawat, 1991). In order to entirely assure an effective solution for any opportunistic potential, contracts have to be *complete, explicit and easily enforceable* (Blumberg, 2001). But of course, in many cases writing these types of contracts is impossible because of complexity and uncertainty. Therefore, contracts are almost always *incomplete* and only partly explicit. This has consequences for the enforceability, especially if third parties as courts or arbiters get involved (Kreps, 1990). Contracts that are ambiguous with regard to the effects of non-compliance are hard to enforce (Blumberg, 2001). Therefore, incompleteness, inexplicitness and non-enforceability limit the meaning of contracts (Macaulay, 1963). Furthermore, designing, and implementing satisfactory contracts is costly (Blumberg, 2001). Efficiency-seeking behaviour in structuring the control of interfirm relationships will, therefore, imply a thorough 'ex ante' assessment of possible commitments.

In sum, transaction cost economics offers an ‘ex ante’ ‘calculative choice’ perspective on the structuring of control in interfirm relationships. These relationships are structured by *farsighted contracting*. The notion of ‘farsightedness’ enables access to “one of the most important ‘tricks’ in the economist’s bag, namely the assumption that economic actors have the ability to look ahead, to discern problems and prospects, and factor these back into organizational/contractual design” (Williamson, 1993, p. 129). These farsighted contracts provide solutions for anticipated opportunism, in order to minimise the necessity to find solutions for problems that derive ‘*ex post*’ (e.g. after actors entered into the transactional relationship). Potential opportunistic behaviour is considered to be the main control problem in interfirm transactional relationships. The main instruments to solve this control problem are credible commitments, which primarily serve to align interests of the actors involved and that can rest upon a bureaucratic mechanism or upon a market mechanism. Credible commitments are written down in contracts. Because of complexity and uncertainty, many contracts are necessarily incomplete and inexplicit, leading to non-enforceability, which in turn limits the importance/meaning of contractual arrangements. As a consequence of the ‘calculative nature’ of the choices, *trust* is viewed as a redundant concept. In contrast, the term *mistrust* seems to fit well with transaction cost economics. *Legitimate mistrust* is the basis for an explicit and efficient design and potential use of credible commitments.

The social and institutional embeddedness of contractual arrangements

The contractual arrangements are embedded in a wider institutional environment and atmosphere that can at least partly compensate for necessary incompleteness of contracts or that can economise on the contractual arrangements. The first ‘ring’ of this environment is the *social network* to which an actor belongs. This social network can be viewed as a business group of agents that interact on a regular basis. Social networks are especially helpful in mitigating the risk of opportunistic entry into a relationship. Various scholars (Granovetter, 1985; Zucker, 1986; Lyons, 1996; Uzzi, 1996) point to their role in information processing and in increasing the credibility of the information. These properties of social networks also have reputation effects, as the members of the network are well informed about the members’ past and present behaviour and whether it is in accordance with the norms of co-operation and social customs defined in the network. This makes the identification of potential suitable partners easier, and thus works as a selection mechanism (Chaserant, 2003). Reputation effects based on information from social networks have their shortcomings, as the parties themselves have to experience how to co-operate in the specific transactional situation. Therefore, if the parties have had previous experiences with transactional relationships they are better able to evaluate the suitability of each other in a new relationship. Gulati (1995) shows how *repeated transactions* between the same partners facilitate the establishment of new relationships. The partners know each other’s way of acting, have an insight into each other’s competences, and know how individuals behave. Larson (1992) described the importance of reputations both of companies and individuals based on a history of personal relations and individual friendship for the formation of long-term relationships. Prior reputations reduce uncertainty and establish expectations. Moreover, repeated transactions make it possible to make use of already established ways of information processing and communicating, and of procedures for co-ordinating the activities. To develop such systems, procedures and people interfaces is a matter of trial and error and costs time.

At a more aggregate level the firm and the social network are embedded in a wider institutional environment, consisting of markets, the law, values and norms etc. In addition to the role social networks can play the institutional environment can serve as a source for trust, i.e. *institution-based trust* (Rousseau et al., 1998). Institution-based trust is based on elements out of the

institutional environment the relationship is subject to, such as legal forms, forms of certification and social norms and values. It is a form of trust that moves into the interfirm transactional relationship from the outside. Contractual instrumental design is embedded in this type of trust. The quality of governmental regulations, how they are maintained, the role they play in the business world, and the influence of other regulatory bodies determine the trustworthiness of the institutional environment in which the transactions are embedded. These regulations and legislations establish a common framework and specific rules governing transactions (Luhmann, 1979; Zucker, 1986; Bachmann, 2001). The same can be said about the rules and norms accepted in social networks the parties are part of (Lorenz, 1999). Therefore, membership of social networks as well as institution-based trust has the potential to economize on transaction costs associated with instrumental design.

Both phenomena (the membership of social networks as well as the existence of institution-based trust) could enable an actor to opt for *voice* and/or *exit* threats. In the case of a voice threat an actor threatens to ruin his partner's reputation. In the case of an exit threat an actor threatens to exit from the relationship. The credibility of these threats is dependent on the institutional context (network embeddedness, wider institutional environment and atmosphere) of the contractual arrangement. It has to be emphasised that credible exit threats require the availability of alternative actors one can switch to, while credible voice threats can only be successful if third parties are willing to (re) consider their current and future business with the actor.

3. Accounting and control from a contractual perspective

We submit that in a contractual realm accounting serves in designing and using credible commitments in order to align interests. Once written down in contracts many of the designed credible commitments serve latent functions; they stay in the flank of the relationship until there is reason to mobilize them. In the case that the accounting system is *de facto* used as a control system (for instance, a performance measurement system) it serves as a more or less bureaucratic device to provide ('ex post') information within the context of interest alignment. In this section we will examine extant literature on accounting and control in interfirm transactional relationships in order to illustrate the roles of accounting and control in a contractual realm.

In his case study of a strategic alliance between NMA Railway Signalling and RIB (a task organisation of the Dutch Railways) Dekker (2004) gives evidence of accounting and control in a contractual realm. Although predominantly facilitating coordinating requirements contractual arrangements serve to align the parties' interests in such a way that "*the alliance contains such incentives that, when successful, it provides benefits to both parties*" (Dekker, 2004, p. 43). In terms of our theoretical modelling there apparently, however small, was *legitimate mistrust* that without a proper institutional arrangement parties could behave opportunistically. A contract had to be in place. This is nicely illustrated by a quote of NMA's managing director (Dekker, 2004, p. 45):

We wanted to have a sound agreement based on trust, but in which certain issues are arranged well, because, in the end, we are not sitting here for our pleasure. And it is nice, those blue eyes, but what if in the future some other blue eyes are sitting over there, what then? And for that reason we have put this on paper.

Credible commitments were made in several forms. In terms of the classification of Weesie and Raub (1996) they took the form of shifting of control to a 'third' party (an alliance board consisting of members of each organization), a restriction of the set of behavioural alternatives (the protection of proprietary knowledge), a modification of the costs and benefits associated with

certain behaviour (a financial incentive system was developed to align the partners' interests and to motivate them to perform adequately) and the balancing of information asymmetry (particularly through the board and by open book accounting). Explicit attention was given to the risk that RIB could make *private use of confidential information* by leaking information from NMA to other suppliers. However, knowing each other for quite a long time, parties did not consider this risk to be very high. This indicates that the contractual arrangement was made against the background of trust as it stems from repeated transactions.

Furthermore, the case study gives evidence that the existence of social networks gives an opportunity to economise on transaction costs caused by the design of a control structure. As a consequence of RIB's (the buyer's) need and intention to initiate more strategic alliances with other partners in the future NMA (the system contractor) could trust its partner, because RIB would not want to be 'voiced' by NMA as a non-trustworthy partner. This institution-based trust allowed for a relatively lean formal control structure.

Langfield-Smith and Smith (2003) describe the outsourcing of the information technology and telecommunications (IT&T) function at Central Energy, an Australian Company operating in the electricity industry. In terms of Van der Meer-Kooistra and Vosselman (2000) they find a trust-based management control pattern in the interfirm transactional relationship.

Nevertheless, performance indicators were intentionally but gradually established in the name of further contract specification. In terms of our theoretical understanding this can be interpreted as an attempt to align interests in order to compensate for legitimate mistrust. As task programmability and output measurability were low, it proved to be very difficult to reach a sufficient level of contract specification at the beginning of the relationship. However, Langfield and Smith analyse that among managers at Central there was dissatisfaction with the lack of contract specifications (Langfield-Smith and Smith, 2003, p. 300). In terms of our theoretical understanding these managers apparently were of the opinion that too little effort had been made to align the interests of the parties and to compensate for legitimate mistrust. Apparently trust, especially contractual trust and competence trust stemming from the institutional environment, proved to be able to sufficiently compensate for legitimate mistrust and allowed for rather unspecified contracts at the beginning of the relationship. But as the relationship matured, task programmability and output measurability increased, providing an opportunity for further specification of the contract including the design of performance measures and targets.

While Langfield-Smith and Smith (2003) report of a movement towards more detailed contract specifications, Seal *et. al* (1999) give evidence of a movement in the opposite direction. They, inter alia, study the role of accounting in enacting a supply chain relationship between an assembler and its suppliers. Following Rognes (1995) they claim that in interfirm transactional relationships *frame-agreements* are likely to be a first step in the cooperative negotiation, which will then develop into more comprehensive *partnership-agreements* (Seal *et. al*, p. 318). In terms of our theoretical understanding this refers to a development in the contractual realm and, thus, to the process of alignment of interests. Yet, in their own case study they conclude that "Parties seemed to begin with a rather specific and detailed document, which, over time, became less specific in detail but broader in terms of general commitment" (Seal *et. al*, p. 319). In fact, Seal *et al.* (p. 319) report that at the end of their observation period, there was still no formal open book agreement. As Seal *et. al* (p. 317) state:

"Specific cost reduction targets were no longer in a document but were expected to emerge from detailed discussions between multifunctional teams from both companies. Discussions showed a willingness to look across company boundaries and allow open-book agreements within pre-agreed limits"

Apparently, self-regulating processes of interaction complemented (and to some extent took the place of) a process of contract specification. This reflects a high-trust situation, as is also suggested by Mouritsen *et. al* (2001, p. 225).

In theoretical terms this non-contractual emergence and use of open-book agreements points to limitations of a TCE-view on the management control of interfirm transactional relationships. Therefore, in the next section a self-regulating process view is clarified.

4. Self-regulating control in interfirm transactional relationships: interaction and relational signalling

Actors that have to make decisions on credible commitments are considered to be *boundedly rational*. The conception of bounded rationality within transaction cost economics is one of a '*less than perfect*' rationality. It is a weakened form of rationality, as people experience limitations in their knowledge and their information-processing capabilities, leading to the impossibility of making optimal decisions. It is this interpretation of bounded rationality ('costly bounded rationality') that gives rise to the notion that decision-making on credible commitments is costly (Radner, 2000). In terms of efficiency, writing a complete contract in complex and uncertain situations could not only be impossible, but could also be too costly. Therefore, the contract will be left incomplete, leading to potential loss of an actor because of opportunism of the other actor that cannot be anticipated. But nevertheless, the incomplete contract is the most efficient form.

Lindenberg (2000, p. 15) holds that "the very insistence on being able to use "the tricks in the economist's bag" keeps him (= *Williamson*, added by authors) (and not just him) from bringing in those tools that are necessary to analyse the contractual relationship as a *human* (emphasis by authors) relationship". Indeed, the instrumental transaction costs economics approach fails to look at the relational processes in the transactional relationship. As a consequence of its focus on calculativeness and discrete 'ex ante' decision making it fails to positively characterize the cognitive evolutionary *process* through which people come to decide and through which opportunism in interfirm transactional relationships is mitigated. This is directly linked to the reductive interpretation of bounded rationality.

Characterisation of the cognitive process through which actors decide requires an alternative interpretation of bounded rationality, one that is not reductive but positive. Radner (2000) calls such a conception one of 'truly bounded rationality', as opposed to the reductive 'costly bounded rationality'. The conception of 'truly bounded rationality' leads to a "focus on decision procedures used by people, since these procedures are showing through their behaviours" (Chaserant, 2003, p. 167). It has to account for the real cognitive capacities of people.

In the real world, people are confronted with fundamental uncertainty, in which it is impossible to foresee all possible temptations to behave opportunistically. Therefore, there is a chance of unexpected opportunistic behaviour to show up *after* the contract has been concluded, without an available solution 'ex ante' written down in the contract. In order to distinguish this type of opportunism from the type that has 'ex ante' been anticipated by the design of credible commitments, this type is labelled *myopic opportunism* (as opposed to the more *strategic* form of opportunism that can be anticipated) (Lindenberg, 2000; Chaserant, 2003). Myopic opportunism is the result of a situation-specific temptation to deviate from the agreement, a temptation that derives from short-term incentives to let the self (self-interest) prevail over the long-term transactional relationship. As for myopic opportunism, there is no 'ex ante' legitimate mistrust.

The important question that follows is: *given the central notion of self-interest seeking, do the decision procedures in interfirm relations that show through actors' behaviour prevent unanticipated opportunism from occurring?*

In order to answer this question we will more fully present a *process theory of rational interaction*. This theory essentially brings a trust-generating process between the partners in a transactional relationship to the fore. Trust is viewed as a “cognitive state depending on an actor’s understanding of the economic relationship he is involved in” (Chaserant, 2003, p. 174). This cognitive state can be viewed as an asset in the relationship, but one that indeed *adds* to the notion of ‘calculated risk’ stemming from a transaction cost approach. It is the result of past deliberative behaviour in an ongoing process. In that process the actors’ search for individual gains is transparently weakened by relational considerations and norms of cooperation (the goal to act appropriately in the transactional relation and not as a pure ‘*homo economicus*’). The process contains *relational signals* through which the absence of myopic opportunism is signalled (Lindenberg, 2000; Chaserant, 2003). They signal that the sender’s goal is not (only) to seek for short-term individual gains, but (also) to conform to norms of cooperation and to preserve the relation. The level of trust between partners will increase, as each partner receives more signals that the other is willing to invest in the relation. The relational-signal mechanism does not reject the importance of self-interest in executing transactions in a transactional relationship, but is consistent with it. Only, instruments working on the basis of this mechanism do not have to be designed as is the case with credible commitments in preventing or fighting *strategic* opportunism. On the contrary, in a process of rational action in order to mitigate myopic opportunism relational signals will be given *deliberately* and *voluntarily* by actors, because such signals foster their *long-term* pursuit of self-interest. In such processes, *enlightened self interest* (Chaserant, 2003, p. 165) guides the rationality decisions and actions: the search for individual gains is transparently weakened by relational considerations and norms of cooperation. Enlightened self-interest gives rise to an actor’s search for individual gain in a certain mixture with the search for compliance with cooperative norms.

The rational trust-generating processes are characterised by *deliberation*, thus fitting with Simon’s notion of bounded rationality (Simon, 1987), which essentially is *procedural* of nature. Decisions are not selected because they give the best outcome (‘substantial rationality’), but because it stems from an appropriate deliberation process. In trust-generating processes, the deliberation is centred on unforeseen temptations to modify plans ‘along the way’ in order to take advantage of a short term opportunity against the actor’s own long-term advantage (temptations to *myopic opportunism*). To give an example (see also Lindenberg, 2000): an actor, for instance, a supplier, could be tempted to fail to conduct rather laborious quality control of his products because of time pressure he experiences as a consequence of a sudden spell of unanticipated high absenteeism of his personnel. Although the need for quality control itself is not specified in the contract, skipping quality control could easily lead to not meeting quality standards that were agreed upon, with possible negative long-term consequences for the relationship. Nevertheless, although the client trusts the supplier that quality control is performed, skipping quality control ‘just for one time’ would be in the supplier’s actor’s short term interest. Or, in another situation, a specific, demanding client could create an incentive to give less priority to orders of old clients. Of course, one could easily formulate many other examples of these temptations leading to deliberation of an actor.

‘Focal goal’ as an essential element in the rational interactive process

According to insights from cognitive social psychology, in an interactive context situation-specific individual *goals* prove to be very important if not leading in guiding an ‘actor’s decision (for instance, Gollwitzer & Moskowitz, 1996; Kruglanski, 1996). Of course actors can have many goals; some of them will be in the foreground and others will be in the background. Given limited cognitive capabilities, the actor cannot give the same amount of attention to every goal. Therefore, given a situation the actor will select goals, which are most important to him. He will

select a *focal goal*, while putting the other goals in the background. This phenomenon is called *framing* (Lindenberg, 1988). The main goal or 'frame' is determined by the definition of the situation and, in turn, also helps to structure the situation, i.e. it helps to find alternative courses of action and to discriminate between alternative courses of action. Furthermore, the frame mobilizes the norms, knowledge and expectations associated with its pursuit. The frame, therefore, not only influences *what* the actor looks at, but also *how* he looks at it (Chaserant, 2003, p. 168). Goals, alternative courses of action and choices are all endogenous and simultaneously deliberated on within a process of judgment (a procedure).

Of course, not only the frame but also the goals in the background will be influential. The degree of their influence will depend on the *salience* of the main goal, e.g. the relative strength of the frame to the goals that are in the background. The less salient the frame gets (the more it competes with goals in the background), the more the choices will also be influenced by the goals in the background and vice versa. In case strong competitive goals exist, the frame gets precarious.

Lindenberg (2000) classifies three *overarching frames*, each of which can contain many sub goals.

A first overarching frame is a *gain frame*. This frame is concerned with the increase of one's scarce resources, such as money, disposable time etcetera. An actor who is in a salient gain frame chooses an action that maximizes his individual gains. He is seeking self-interest and fits the standard figure of the 'homo economicus'; he will seek for self-interest, even if it requires opportunism.

A second overarching frame is a *loss frame*. There is asymmetry between gains and losses in the sense that losses weight heavier than gains (Kahneman et.al, 1991). Because compared to gains losses give rise to strong emotional responses the expectation or experience of a loss immediately induces a frame switch towards a loss frame, which aims at preventing or fighting the feeling of loss. Furthermore, the time of a loss frame is relatively short (Loewenstein, 1996). The higher the loss, the stronger the emotion of the actor and the higher the probability of an immediate frame switch (Lindenberg, 1993). The emotional strength of a loss frame and its short time horizon make it potentially very damaging to a longstanding interfirm transactional relationship; actors will do almost anything and in a quick way to avoid or fight losses, even if they have to harm their transactional relation and irregardless of the costs that incur to manage the loss. These costs are linked to a gain frame, which, once the loss frame has been mobilized, is in the background. It is important to note that such a loss frame will also be mobilized when the non-realisation of a firmly anticipated gain occurs and leads to a feeling of disruption. Missed 'golden opportunities' to one of the parties involved, brought in by third parties, can easily lead to shocks in ongoing interfirm relationships (Lindenberg, 2000).

A third overarching frame is a *normative frame*. Here the goal is 'to act appropriately', 'to do the right thing' (Lindenberg, 2000). By complying with accepted norms of behaviour the actor is seeking social approbation or is trying to preserve the relationship. Generally speaking, normative frames can best be stabilized in groups through rites and rituals and through common purpose. Rites, rituals and common purpose influence the salience of the frame by increasing the value of the focal goal and by decreasing the value of conflicting background goals. In a normative frame, the costs of conformity and the benefits of non-conformity are in the background, there being an element in a gain frame. Their influence is, therefore, dependent on the salience of the normative frame.

Lindenberg (2000, p. 20) states that the salience of a frame is dependent on two important variables: emotional ('hot') and instrumental ('cold') relevance to 'self'. For salience, 'hot' goals are stronger than 'cool' goals. His *a priory* ranking of the three frames in terms of the strength vis-à-vis each other is loss frame first, and then gain frame and then normative frame.

“ *The loss frame is tied more directly to emotions and short-term effects than the other two. Increasing one’s own resources (gain frame) is more directly instrumentally relevant to self than conformity to norms for the sake of ‘appropriateness’. In order not to be displaced by a loss or a gain frame, a normative frame must be stabilized via congruent ‘background’ goals, which, in turn, are directly, emotionally and/or instrumentally relevant for self. For example, the background of a normative frame can be the valued membership of a group and/or an emotional tie to a certain identity (say, a ‘self-respected business man’)*”

Actors in a gain frame are seeking self-interest; if they have to, they will not hesitate to behave opportunistically. However, the tendency towards myopic opportunism will be mitigated when there are conflicting goals (a normative frame) in the background. Such a situation leads to enlightened self-interest, a “duality between a gain frame and the willingness to comply with cooperative norms” (Chaserant, 2003, p. 170). Given credible commitments that solve problems of legitimate mistrust and thus of potential strategic opportunism, trust will only be generated if this myopic opportunism is being accounted for in the daily routines of longer-term interfirm relations.

In order to check for myopic opportunism, relatively strong and stable normative goals are especially needed in situations in which detailed monitoring of contract performance is difficult and thus costly. Fortunately, the interaction process between the actors involved can facilitate the strength and stability of these normative goals. An actor not only takes an interest in his own normative frame, but also in that of his partner. This is mainly due to the damaging consequences of a potential *loss* on framing. As was explained earlier, an actor will do almost anything and in a quick way to avoid or fight losses, even if he has to harm the transactional relation and regardless of the costs that incur to manage the loss. If he feels confronted with opportunistic behaviour of his partner and thus experiences losses, then the continuance of the relationship itself with potential long term negative consequences could become at stake. Therefore, given the potential consequences each actor will probably like to avoid his partner to switch to a loss frame. Thus, each partner takes an interest in stable normative goals and is, therefore, willing to keep his own normative goals stable and not to switch to a gain frame.

This insight leads to the conclusion that the *efforts* of each actor do *not* have to be *controlled* by the other. Just by keeping their normative frames stable and by showing trustworthy behaviour, actors can avoid the mobilization of loss frames with their damaging potential. Actors can show trustworthy behaviour by using *relational signals*. Another actor will trust an actor if the other understands by the signals in the trustee’s behaviour that the trustee has stable cooperative behaviour, based on stable normative goals. Therefore, actors will only *monitor relational signals*, thereby economizing on monitoring costs. Here, trust is conceived as a cognitive state that generates positive expectations of the intentions and efforts of the other.

Trust in a transactional relationship can, therefore, be compatible with the seeking of self-interest by individual actors. Trust emerges when self-interest is sufficiently enlightened (Chaserant, 2003).

Actors with salient normative frames in the background will behave sacrificially for the sake of the relation. In showing this behaviour they signal commitment to the relationship. According to Lindenberg (2000) there are five categories of situations (which are recognizable in any cooperative project) asking for such a sacrifice, i.e. asking to follow norms that are appropriate in this situation, even if such action is against one’s own interest. It is precisely the following of such norms that gives off the relational signals. The first of these ‘solidarity situations’ (Lindenberg, 2000, p. 24) is a *common good situation*. Both partners belong to a group (Cooper & Slagmulder, 2004, referring to Toyota make report of a *family*); each of the partners will cooperatively contribute to the common good, even if he or she could free ride (of course, the minimum expected contribution in terms of effort, money etc. can vary in different situations).

Second, there is a *sharing situation*. If one of the partners is in a position to divide joint divisible benefits and costs he will not maximize his own gain, but will take a 'fair share' (of course, what is fair can vary with the specific situation). Third, there is a *need situation*. In times of need each partner will help the other partner (of course, what constitutes need and the minimum amount of help that is expected can vary for different situation). Fourth, there is a *breach situation*. Each partner will refrain from hurting the other, even at his own expense (of course, the minimum amount of cost expected for solidarity behaviour varies). Fifth, there is a *mishap situation*. Although past actions of a partner were intendedly out of solidarity, they factually did not come out that way. In such a situation the actor will explain his intentions to the other actor, he will apologize and he will take care of the possible damage his actions caused to the other. Or, the opposite: if an actor knows in advance that for some reason he cannot keep to the agreement, he will warn the others in advance, so that they can take measures to mitigate the damage. Defection in any one of these five situations points to an instability of the normative frame and will harm the trust building process. Such defection will lead the other to a cognitive state in which he interprets cooperative behaviour in any of the other situations as 'strategic', as coming out of a gain frame, though having the appearances of a normative frame. So, the '*shadow of the past*' (Raub and Weesie, 1990) appears to have a strong impact on the level of trust, even more so than the '*shadow of the future*' (see also Blumberg, 2001).

5. Accounting and self-regulating control

We submit that in an interactive relational realm accounting serves in self-regulating control. Therefore it is part of relational signalling aiming at the alignment of commitments to the transactional relationship.

Cooper and Slagmulder (2004) give strong evidence of accounting playing a major role in self-regulating control. They show, how a number of observed clusters of interorganisational cost management practices are contingent upon observed specific relational contexts. Particularly, they distinguish three clusters of interorganisational cost management practices: (1) functionality-price-quality tradeoffs. FPQ's are associated with small changes in the designs of the items produced, changes that can be initiated and accommodated by a single supplier firm in the supply chain; (2) interorganisational cost investigations. Interorganizational cost investigations are associated with more significant changes, which require design modifications of the items produced or of the production processes by more than one firm in the chain; and (3) concurrent cost management. The latter has to do with very substantial changes in designs of the items produced by the interacting firms, frequently leading to the necessity for both the buyer's and the supplier's products to be modified in a compatible fashion. Therefore, in many cases the design changes have to be engineered simultaneously, or, if there is parallel engineering, buyer and supplier have to provide each other with sufficient information.

The three clusters of practices are associated with three observed specific relational contexts. Using the terminology of one of the companies involved, Cooper and Slagmulder define these contexts as, (a) a context of 'family members'. This context consists of a buyer and a number of suppliers that have a very high 'design dependence', i.e. they establish joint specifications and take joint responsibility for product design; (b) a context of 'major suppliers'. This context consists of a buyer and a number of suppliers with less design dependence; the suppliers are not held responsible for the functional design specifications of the items, only for the technical designs of the items they supplied; and (c) a context of 'subcontractors'. Subcontractors

manufacture outsourced items that are designed by the buyer, they are typically highly skilled at manufacturing specialized items.¹

The Cooper & Slagmulder paper gives evidence that the nature of the accounting system (cost management system) is contingent upon the relational context. In fact, by the description of a context of 'family' and 'friendship' in interfirm relationships they challenge Williamsons' assertion that trust and calculativeness belong to distinct relational areas.

Interorganizational cost investigations (observed in a context of major suppliers) have a higher ability to improve cooperative behaviour than functionality-price-quality tradeoffs in a context of subcontracting (their 'solidarity character' is higher), while concurrent cost management as observed in a family context has the highest 'solidarity' character. In the family context a good cooperative relationship is maintained and trust is built. Apparently, partners mobilize strong normative frames. They generated 'goodwill trust' (Cooper & Slagmulder, 2004, p 18):

"Both sides (i.e. the buyer, Komatsu, and the supplier, Toyo) viewed the new relationship as akin to a strong friendship, an example of a self-enforcing safeguard that reduces the need for legal and other formal protection mechanisms"

The concurrent cost management system did not only passively reflect the family character and thus the existence of normative frames, but actively signals trustworthy behaviour. The paper (p.17) gives a quote of the words of the buyer's purchasing manager that can exemplify this (the quote representing a *common good* situation and a *sharing situation*):

"Sometimes our sharing of cost information, coupled to our knowledge of Toyo's (supplier) profits, can lead to a conflict of interest, with pressure building within Komatsu to reduce target costs where Toyo's profits are known to be high. However, we share common goal-getting costs as low as possible-, which ensures that these conflicts rarely become serious. To reduce the incidence of such conflicts, we do not set our target costs for parts manufactured by Toyo based upon our knowledge of Toyo's costs. Instead, we try to set our target costs independently of Toyo and let Toyo make as much profit as possible".

Cooper and Slagmulder's paper also gives evidence that the normative frames are somehow balanced with gain frames, which in this family context are expected to be less salient. The paper gives a quote that reflects the existence of credible exit threats (p.18):

"More specifically, Toyo had access to Komatsu's future product plans, which contained highly valuable information for Komatsu's competitors. However, Komatsu in turn had access to highly proprietary information about Toyo and, if Toyo were to defect, Komatsu could retaliate by sharing that information with Toyo's competitors"

Dekker's study into the control of a strategic alliance between NMA Railway Signalling and RIB (a task organisation of the Dutch Railways) (Dekker, 2004) also gives evidence of relational signalling. In the contact phase, before the contractual arrangements were concluded, NMA (the

¹ Cooper & Slagmulder also mention a fourth context: a context of common suppliers. These suppliers supply catalogues products; there is no design dependence between the buyer and the supplier. Because of the lack of dependence between buyer and seller, there is a transactional relationship that is mainly governed by a market mechanism. These 'arm's-length relationships' are not accompanied by any form of interorganizational cost management system. That is, there is no sign of either a instrumental control use of cost management practices nor of a more 'solidarity' -use of such a system.

potential system contractor) signalled trustworthy behaviour by allowing RIB detailed insights into the cost structure of the product, including profit margins. In doing so, NMA signalled that it trusted RIB, because given the lack of institutional arrangements RIB still would have the opportunity to switch to other parties, opportunistically using the information it had collected from NMA. As Dekker notes “this risk taking behaviour and RIB’s reciprocating behaviour further nurtured relational trust and speeded up negotiations and the design of the contract significantly” (Dekker (2004, p. 45).

Apparently not only the relational signalling in the contact phase facilitated the further trust building in later stages of the relationship, but also the contractual arrangements themselves were placed in the context of trust building. This gives evidence that an institutional arrangement not only serves an instrumental function in attenuating potential strategic opportunistic behaviour, but indeed also facilitates relational signalling in the course of the relationship. Partners emphasised that the use of formal controls (such as goal sharing and performance measurement) helped to create mutual transparency, which they found to be an important basis of their relationship. So, the formal controls were not placed in a ‘bureaucratic’ context aiming at the generation of ‘ex post’ monitoring information with a strong emphasis on accountability, but in a context of a ‘common good’ situation and a context of information sharing, for instance, for purposes of allocation of costs and benefits. In case ‘ex post’ measurement was necessary, for instance, to measure cost reductions in operating and maintenance activities, ‘the negotiation of a reasonable estimate’ (Dekker, 2004, p. 46) was put in place, signalling trust in each other. Furthermore, the case description gives evidence that there is *intentional incomplete contracting* signalling trust in each other that in the course of the relationship adequate adjustments to changes in circumstances would be made. Apparently, contracts allowed for procedural rationality.

6. Linkages between socially embedded instrumental design and trust building at the level of the relationship

Relational signals have the potential to regulate the relationship and to mitigate opportunism. However, given legitimate mistrust, it cannot compensate for potential strategic opportunism. To compensate for legitimate mistrust, ‘flanking arrangements of cooperation’ (Lindenberg, 1998) have to be in place. An important flanking institutional arrangement is the contract, which facilitates the design of credible commitments for mitigating strategic opportunism. In turn, the contracts are flanked by social network and by a wider institutional environment and atmosphere.

The writing of contracts and the subsequent implementation and use of formal control devices have to be avoided if there is no legitimate mistrust. This is a direct consequence following from TCE, as the design and use of unnecessary costly institutional arrangements are inefficient. Moreover, there are also indirect costs involved. In criticising TCE for its assumption that organizations exist because of their ability to attenuate opportunism through control Ghoshal and Moran (1996) give evidence that the use of formal (hierarchical) control devices not only can have positive consequences in terms of attenuating opportunistic behaviour, but also can have negative consequences in terms of an *increased proclivity* to behave opportunistically. The latter is the result of a more negative disposition and attitude towards the organization and the transaction partner that emerges as *a consequence of the implementation and use of formal control devices*. There is convincing empirical evidence (e.g. Enzle and Anderson, 1993) that formal control reduces the intrinsic motivation and the commitment towards the organization. In the context of a transactional relationship this would imply that particularly in situations which lack legitimate mistrust the design and use of credible commitments and credible exit threats have to be avoided for the sake of appropriate non-opportunistic behaviour in the relationship. If at the

start partners in such a transactional relationship have relatively strong normative frames and thus a very cooperative attitude, they might perceive the writing, implementation and use of credible commitments as a 'loss' of cooperative norms. Therefore, they might change the precarious balance of their frames into the direction of a gain frame, thus negatively influencing the cooperative relation.

But, on the other hand, if there is legitimate mistrust but no socially embedded formal control structure to compensate for it, the lack of institutional arrangements will prohibit the trust building process because in the actors' eyes interests are inadequately aligned. Ergo, in situations of legitimate mistrust the embeddedness of the relational process in institutional arrangements then is a *conditio sine qua non*.

It seems that Langfield-Smith and Smith (2003) provide contra-evidence for the assumed negative correlation between formal controls and trust building. In studying the outsourcing of IT & T at Central Energy they state: "Interestingly, goodwill trust continued to exist, and may even have strengthened, in the face of the development of more rigid performance expectations and the development of contract specifications" (Langfield-Smith and Smith, 2003, p. 304). Performance indicators at the relationship were intentionally established in the name of further contract specification.

Although in terms of our theoretical understanding this further specification should be primarily placed in the context of interest alignment and the compensation for legitimate mistrust, the process of further specification (the design activity) in this relationship apparently coincides with trust building in an interactive context of familiarity. Thus, the *process* of contract specification is a *vehicle for relational signalling*. The process of interest alignment then coincides with the process of alignment of commitment. The contractual is linked with the relational.

Looking through our theoretical lens it would be interesting to know whether the further specification only serves to have instruments put in place in the flank; instruments that only latently come into action. Or, reversibly, whether the further specification also leads to an instrumental and bureaucratic *use* of controls, thus linking the contractual to the operational. If the latter is true, then indeed the further specification could signify a movement away from the trust-based pattern of control towards a bureaucracy-based pattern of control, as Langfield-Smith and Smith (2003, p. 299) are stating. But if the further specifications are predominantly used to create mutual transparency and are not used in an instrumental way (comparable to what Dekker (2004) found in his study) we submit that then the control pattern remains to be trust-based. The contract specifications then help to construct a 'common good' situation and to create a context of information sharing, for instance, for purposes of allocation of costs and benefits. Viewed from this perspective more detailed specification of contracts and more 'formal' contractually based accounting might indeed "contribute positively to the transactional atmosphere of the relationship" (Seal *et. al*, 1999) and, therefore, not conflict with the building of trust, as Langfield-Smith and Smith, 2003, p. 300) suggest.

However, this does not refute our argument that the *implementation and use* of formal control devices might reduce the commitment towards the interfirm transactional relationship. It is the way the accounting tools and information is *used* (or is intended to be used) that we submit to be decisive for the relationship between commitment and control, not the process of writing contracts and the concluding of contracts *per se*.

7. Accounting in the management control of interfirm transactional relationships: the main contribution to the debate

Our main case proposition stemming from the analysis so far is twofold. First, in addition to its roles in the coordination of activities (the operational realm), accounting can play functional as

well as constitutive roles in a contractual realm and in an interactive relational realm. Second, the accounting functions in the three realms are interrelated.

In a contractual realm accounting serves in designing and using credible commitments and credible exit threats in order to align interests. Once written down in contracts many of the designed credible commitments and credible exit threats serve latent functions; they stay in the flank of the relationship until there is reason to mobilize them. In case the accounting system is *de facto* used as a control system (for instance a performance measurement system) it serves as a more or less bureaucratic device to provide ('ex post') information within the context of interest alignment.

In an interactive relational context accounting supports relational signalling in order to align commitments. In an operational context (in terms of Tomkins (2001) the 'mastering of events') accounting serves as a motivational decision support and control device in order to enhance the effectiveness and efficiency of the activities within the transactional relationship. The legitimacy for an operational use of accounting and control systems can both stem from the contractual arrangement and thus have a formal base, or from self-regulating rational interactive processes.

There are some important differences between accounting for the alignment of interest, accounting for the alignment of commitment and accounting for the coordination of activities. A first difference concerns the power/legitimacy base for the use of accounting. The power/legitimacy for its use for the alignment of interest stems from a formal contractual base. The power for its use for the alignment of commitment stems from trust built at the level of the transactional relationship. And the power/legitimacy for the coordination of activities can have a formal contractual base as well as an informal trust base. Second, the aims of accounting in the three realms differ. They range from preventing strategic opportunism from occurring via preventing myopic opportunism from occurring to coordinating activities in the operational realm. Third, there is a difference in emphasis on objects. Accounting for alignment of interest emphasises the (results of) the behaviour of specific human actors, accounting for alignment of commitment emphasises the relation between human actors and accounting for coordination emphasises the activities. Fourth, accounting for the alignment of interest is the result of intentional instrumental design, whereas accounting for alignment of commitment is emergent and self-regulating. Accounting for the coordination of activities can be both. This implies, fifth, that for alignment of interest there is more or less formal information processing, whilst for the alignment of commitment there is interactive information sharing (accounting for the coordination of activities can have both). Sixth, drawing upon the distinction between 'ex ante' and 'ex post'-information, accounting for the alignment of interest can 'ex ante' serve incentivization and the balancing of information, while accounting for the alignment of commitment can 'ex ante' direct attention towards a need situation and/or can be of assistance in joint problem solving. For coordination of activities accounting can 'ex ante' serve functions of attention direction, planning and/or problem solving. Seventh, *after the events* ('ex post') accounting serves accountability purposes in the contractual realm, whereas in the relational realm in order to align commitment accounting serves to share information for allocation purposes and/or to account for a mishap. For the coordination of activities accounting can be of help as a measurement- and evaluation device.

Essentially, eighth, accounting for the alignment of interest is part of a system of behavioural control or output control and accounting for the alignment of commitment is part of a trust building process. Accounting for the coordination of activities is part of an operational information system that serves to enhance the effectiveness and efficiency of the activities at hand.

Figure 1 summarizes the main differences between accounting for the alignment of interest, accounting for the alignment of commitment and accounting for coordination of activities:

Accounting for alignment of interest	Accounting for alignment of commitment	Accounting for coordination of activities
Contract-based Aims to prevent strategic opportunism Emphasis on human actors Instrumental design Formal information processing Incentivization and balancing information ('ex ante') Accountability ('ex post')	Trust-based Aims to prevent myopic opportunism Emphasis on relations Emergent and self regulating Interactive information sharing Attention direction to a need situation and/or joint problem solving ('ex ante') Sharing information for allocation purposes and/or accounting for a mishap ('ex post')	Contract and/or trust based Aims to coordinate activities Emphasis on activities Instrumental design and/or emergent and self regulating Interactive information sharing and/or formal information processing. Attention direction, planning and/or problem solving ('ex ante') Measurement and evaluation ('ex post')
Meeting standards in behavioural control and/or output control	Trust building in the relationship	Enhancing effectiveness and efficiency of activities

Figure 1: accounting for alignment of interests, alignment of commitments and coordination of activities

In distinguishing three types of accounting information in interfirm transactional relationships we add to the distinction made by Tomkins (2001). Tomkins (2001, p. 171) distinguishes information that relates to the willingness to trust ('type 1'-information) from information needed for the 'mastery of events' ('type 2'-information). Our analysis suggests that a third type of information can be distinguished: information that relates to contractual instrumental design ('type 3'-information).

Tomkins (2001) proposed a debate on the interaction between trust and information and, accounting information being part of that information, between trust and accounting. As trust and the provision of (accounting) information are both uncertainty absorbing mechanisms he claims that controllers and management accountants could benefit from a well developed theory on how the provision of (accounting) information needs to take into account the trust that exists and is gradually further built in a transactional relationship. In his view such a theory should go beyond the simple static inverse relationship between the willingness to trust and information need, as Wicks *et al.* (1999) suggest. Therefore, Tomkins adopts a dynamic process view. While acknowledging that trust is contextually dependent on culture and personal propensities, in Tomkins' view trust derives from "learned, usually interactive, experiences" (Tomkins, 2001, p. 168). Over the lifecycle of a relationship the association between trust and information is characterized by an inverted U-shape (Tomkins, 2001, p. 170). In the beginning of a relationship there will be a relatively low need for *either* trust *or* information as the "risks attached to breach of commitment are lower than at later stages of the relationship" (Tomkins, 2001, p. 170). As the relationship matures trust and the provision of information will be positively associated, the latter being necessary to build the former. From a certain level of trust the information flow will gradually congeal.

Tomkins explicitly places the provision of information in the context of 'control'. Uncertainty can be absorbed "either by building higher levels of trust or by building more extensive control mechanisms with the associated increase in information" (2001, p. 167). So, for Tomkins in a dynamic sense trust building is intertwined with control. We claim that his analysis can be further refined. Information in the context of (formal) control is primarily associated with contractual arrangements between parties and thus with the alignment of interests, while trust is primarily associated with information in the context of relational signaling and thus with the alignment of commitments. Therefore, trust is primarily associated with type 1-information, whereas more formal control is associated with type 3-information. To the extent that empirical evidence for the 'U-shape' curve can be found, we submit that it is evidence for the relationship between trust and type 1- information, i.e. trust and relational signaling. This is not to say that there is no association between trust and type 3-information, i.e. trust and control. The association between trust and control is twofold. First, as was suggested before, used in a bureaucratic way formal control could reduce commitment towards the relationship and, therefore, negatively effect the level of trust. This would lead to trust being negatively associated with the provision of type 3-information. Second, given our analysis there is an indirect association between trust and control information. Legitimate institutional arrangements (e.g. contractual arrangements and arrangements in the institutional environment of the relationship) and the provision of information that follows from them will be *prerequisites* for the trust building process to develop. So, the level of trust is conditional upon an information flow that serves to compensate for legitimate mistrust.

Referring to Macaulay (1963; 1985) and Vincent-Jones (1985) Tomkins (2001, p. 177) views contracts predominantly as planning and coordinating devices rather than control devices. We agree that the significance of contractual arrangements for attenuating appropriation concerns should not be overstated and even analyzed, too much of its *de facto* use could harm the cooperation in the relationship. However, we also argued that a lack of legitimate institutional arrangements could prevent a trust building process from developing.

We submit that the three types of information are connected to three distinct managerial areas. Agreeing with Tomkins (2001) that professional controllers and management accountants could benefit from the development of theory our analysis indicates that controllers would want to make a distinction between the three managerial areas and their related needs for (accounting) information. In a contractual realm controllers could help in designing, implementing and using accounting systems. Furthermore, they could safeguard against an overemphasis as well as against an under-emphasis on instrumental design and implementation. In a relational realm they are assumed to have a more occasional role in providing information for relational signalling. In an operational realm they could assist in providing decision-oriented information as well as control information regarding the execution of activities.

8. Conclusions and discussion

At the core of an interfirm transactional relationship there is interaction. The cognitive drivers of this interaction are dependant upon the individual goal(s) of the parties at hand. The analysis starts from the assumption that in an economic relationship each party seeks for individual gain; their focal goal is individual gain. Therefore, a gain frame will heavily influence the way a party defines the relationship he or she is involved in respectively, and the way he or she acts in the relationship. Economic theory, especially transaction cost economics, states that the search for individual gain could be accompanied by opportunism: in order to find and collect individual gain, each party could be tempted to cheat or to lie to the other party (parties). Drawing on a process theory of rational interaction we claim that as long as each party positively values the

economic relationship he or she will also feel the necessity to show cooperative behaviour and to suppress temptations for opportunism. Or to put it differently: he or she is aware of the necessity to transparently signal cooperative behaviour in which opportunism is eliminated.

Parties that explicitly signal cooperative behaviour (i.e. parties that act appropriate) have relatively strong cooperative frames in the background, leading to less salient gain frames and, therefore, too little opportunistic behaviour. The interactive process of relational signalling will lead to *trust*, which in this context is viewed as a cognitive state resulting from past behaviour. Trust, so to say, is the ‘shadow of the past’ resulting from an interactive process in which parties draw on procedural rationality. This ‘shadow’ gives rise to expectations that the other party will continue to behave cooperatively and non-opportunistically during the remainder of the relationship.

Accounting proves to be able to serve an important function in relational signalling and thus in building trust. It generates information in order to (jointly) solve problems, to share information for allocation purposes, to be co-operative and supporting in a need-situation or to account for a mishap.

Using second-hand data some anecdotal empirical evidence of a relational signalling function of accounting was given related to contractual arrangements and the institutional environment.

The building of trust as it is described above rests on back-looking mechanisms: parties come to trust each other by looking back to the cooperative behaviour they showed. To be more precise, the building of trust is the result of monitoring the relational signals. However, this building of trust necessarily has to be *flanked* by *forward-looking* instrumental design. At certain points in time ‘farsighted’ parties will also look forward and discern potential problems of strategic opportunism, and factor these back into instrumental design in the form of credible commitments. In doing so, they try to compensate for legitimate mistrust which is present in case breach of the relationship would be ‘blatantly in the self-interest’ of one of the parties. We argued that the presence of legitimate mistrust that is not compensated for stands in the way of the interactive building of trust. Credible commitments serve a function to align interests by changing the incentives in such a way that breach of the relationship would not be ‘blatantly in the self-interest of a party’ (Lindenberg, 2000, p. 12). Given uncertainty and bounded rationality, credible commitments in the context of contracts are always incomplete and, therefore, not easily enforceable. Nevertheless, according to TCE they are able to contain the most efficient means to prevent or fight strategic opportunism.

Just as accounting can serve a function in the building of trust, it can also serve a function in compensating for legitimate mistrust. For instance, formal performance measurement and the linkage of payments to performance can help in diminishing mistrust. Such a (potential) use of accounting tools necessarily flanks a relational and an operational context in which a rational process of (inter) action is evolving. Furthermore, the contractual function and the relational function of accounting prove to be interrelated.

Prior to contracting there has to be a certain level of trust. As is clearly illustrated by the evidence from a number of studies (e.g. Langfield-Smith and Smith, 2003; Dekker, 2004) trust building processes in a transactional relationship may precede the concluding of institutional arrangements. Furthermore, instrumental contractual design is in itself a process embedded in an institutional environment consisting of organizational networks, markets, law, social values and norms. This institutional environment can be an important source of trust. This institution-based trust has the potential to prevent strategic opportunism occurring. Therefore, it directly influences the efficient design and potential use of credible commitments (including formal controls). The paper illustrated this with some case study results. Apparently, in their function to create safeguards against future opportunistic behaviours contracts incorporate a level of trust that was

generated from the past and/or from the institutional environment in which the contractual arrangements are made.

Finally, examination of case study material illustrated that contractual arrangements not only serve to compensate for legitimate mistrust, but that they also can facilitate trust building and the relational signalling that accompanies it. Moreover they serve future operational management by allowing for procedural rationality in coordinating activities. They do this by creating conditions for future trust-building processes and relational signalling to develop and for coordination and adaptation in the course of the relationship. Conversely, trust building processes prove to be able to facilitate the writing of contracts. Therefore, a TCE-view on contracts proves to be too narrow and too static a view for understanding control in interfirm transactional relationships. In this respect, the TCE-view on the control of interfirm transactional relationships is suggested as becoming embedded in a process view of rational interaction.

The analysis in this paper opens up possibilities for future research. First, future research could reveal empirical (contra) evidence for the use of accounting for the alignment of commitment. Of particular interest would be to know whether a bureaucratic use of contractual arrangements in a transactional relationship has negative consequences for the cooperative behaviour of the parties involved. Do parties in such a relationship indeed have more salient gain frames and do they thus give more evidence of myopic opportunism than parties in a relationship with a relatively strong relational focus?

Furthermore, although we agree with Tomkins (2001) that in an analytical sense operational information can be distinguished from relational information but can hardly be separated from it in practice, we feel it would be useful to do some empirical research into the degree to which relationship-management is separated from operations management and into the way separate information flows are connected to these different areas of management. Moreover it would be interesting to do future research into the dynamic links between the operational, the relational and the contractual realms.

Finally, we think it useful to do research into the roles of management accountants in designing and implementing institutional arrangements as well as in relational signalling. In doing so we will also achieve a more elaborated view on the roles of accounting information.

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